

**JOE HALDEMAN**

**NORMAN SPINRAD**

SEPT. 1977 Vol. 1, No. 3

\$1.25 50p U.K. 06524

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# Cosmos

SCIENCE FICTION AND FANTASY

**RICHARD A.  
LUPOFF**  
*A Child's  
Story*





# Cosmos

SCIENCE FICTION AND FANTASY

Vol. 1, No. 3 Sept. 1977

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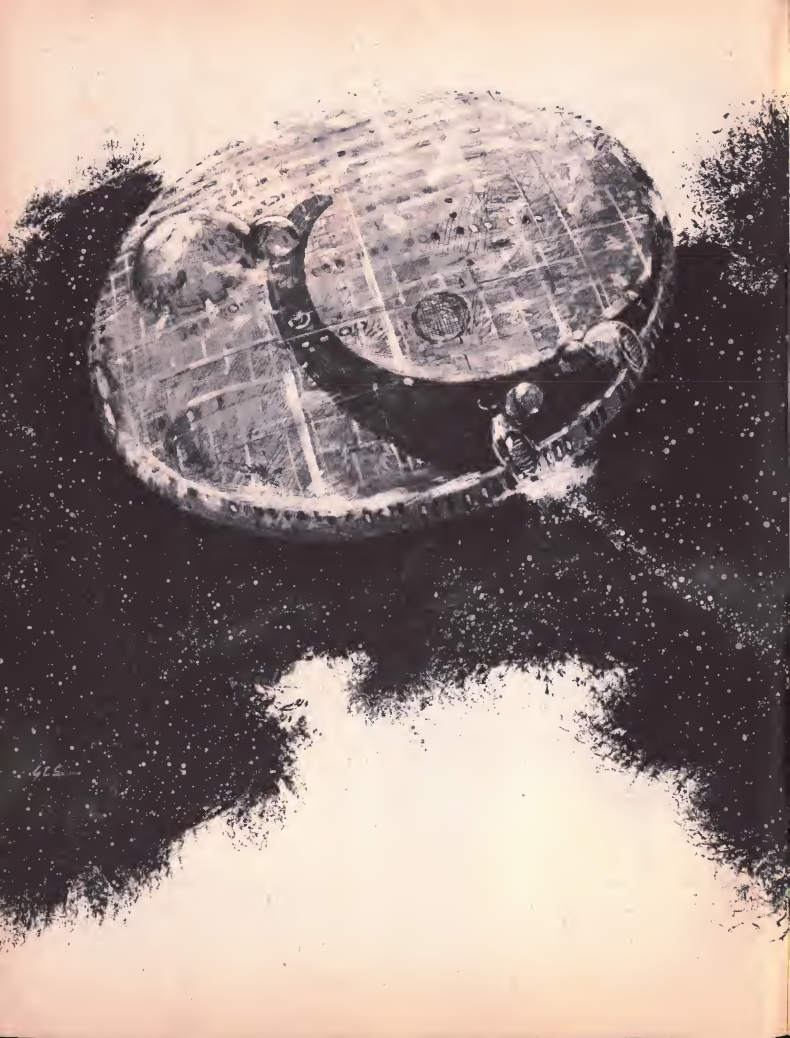
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SHORT STORY

ONE MAN'S MEAT .....

**ALL THE  
UNIVERSE  
IN A  
MASON  
JAR**

**JOE HALDEMAN**

New Homestead, Florida: 1990.

John Taylor Taylor, retired professor of mathematics, lived just over two kilometers out of town, in a three-room efficiency module tucked in an isolated corner of a citrus grove. Books and old furniture and no neighbors, which was the way John liked it. He only had a few years left on this Earth, and he preferred to spend them with his oldest and most valued friend: himself.

But this story isn't about John Taylor Taylor. It's about his moonshiner, Lester Gilbert. And some five billion others.

This day the weather was fine, so the professor took his stick and walked into town to pick up the week's mail. A thick cylinder of journals and letters was wedged into his box; he had to ask the clerk to remove them from the other side. He tucked the mail under his arm without looking at it, and wandered next door to the bar.

"Howdy, Professor."

"Good afternoon, Leroy." He and the bartender were the only ones in the place, not unusual this late in the month. "I'll take a boilermaker today, please." He threaded his way through a maze of flypaper strips and eased himself into a booth of chipped, weathered plastic.

He sorted his mail into four piles: junk, bills, letters, and journals. Quite a bit of junk, two bills, a letter that turned out to be another bill, and three journals—*Nature*, *Communications* of the American Society of Mathematics, and a collection of papers delivered at an ASM symposium on topology. He scanned the contributors lists and, as usual, saw none of his old colleagues represented.

"Here y'go." Leroy sat a cold beer and a shot glass of whiskey between *Communications* and the phone bill. John paid him with a five and lit his pipe carefully before taking a sip. He folded *Nature* back at the letters column and began reading.

The screen door slapped shut loudly behind a burly man in wrinkled clean work clothes. John recognized him with a nod; he returned a left-handed V-sign and mounted a bar stool.

"How 'bout a red-eye, Leroy?" Mixture of beer and tomato juice with a dash of Louisiana, hangover cure.

Leroy mixed it. "Rough night, Isaac?"

"Shoo. You don't know." He downed

half the concoction in a gulp, and shuddered. He turned to John. "Hey, Professor. What you know about them flyin' saucers?"

"Lot of them around a few years ago," he said tactfully. "Never saw one myself."

"Me neither. Wouldn't give you a nickel for one. Not until last night." He slurped the red-eye and wiped his mouth.

"What," the bartender said, "you saw one?"

"Saw one. Shoo." He slid the two-thirds empty glass across the bar. "You wanta put some beer on top that? Thanks."

"We was down the country road seven-eight clicks. You know Eric Olsen's new place?"

"Don't think so."

"New boy, took over Jarmin's plat."

"Oh yeah. Never comes in here; know of him, though."

"You wouldn't hang around no bar neither if you had a pretty little . . . well. Point is, we was puttin' up one of them new stasis barns, you know?"

"Yeah, no bugs. Keeps stuff forever, my daddy-in-law has one."

"Well, he picked up one big enough for his whole avocado crop. Hold on to it till the price is right, up north, like January? No profit till next year, help his mortization."

"Yeah, but what's that got to do with the flying—"

"I'm gettin' to it." John settled back to listen. Some tall tale was on the way.

"Anyhow, we was gonna have an old-fashion barn raisin' . . . Miz Olsen got a boar and set up a pit barbecue, the other ladies they brought the trimmin's. Eric, he made two big washtubs of spiced wine, set 'em on ice till we get the barn up. Five, six hours, it turned out (the directions wasn't right), *ho!* afternoon, and we just headed for that wine like you never saw."

"I guess we was all pretty loaded, finished off that wine before the pig was ready. Eric, he called in to Samson's and had 'em send out two kegs of Bud."

"Got to get to know that boy," Leroy said.

"Tell me about it. Well, we tore into that pig and had him down to bones an' gristle in twenty minutes. Best god-darn pig I ever had, anyhow."

"So's not to let the fire permit go to waste, we went out an' rounded up a bunch of scrap, couple of good-size logs. Finish off that beer around a bon-

fire. Jommy Parker went off to pick up his fiddle and he took along Midnight Jackson, pick up his banjo. Miz Olsen had this Swedish guitar, one too many strings but by God could she play it."

"We cracked that second keg 'bout sundown and Lester Gilbert—you know Lester?"

Leroy laughed. "Don't I just. He was 'fraid the beer wouldn't hold out, went to get some corn?"

John made a mental note to be home by four o'clock. It was Wednesday; Lester would be by with his weekly quart.

"We get along all right," the bartender was saying. "Figure our clientele don't overlap that much."

"Shoo," Isaac said. "Some of Lester's clientele overlaps on a regular basis."

"Anyhow, it got dark quick, you know how clear it was last night. Say, let me have another, just beer."

Leroy filled the glass and cut the foam off. "Clear enough to see a flyin' saucer, eh?"

"I'm gettin' to it. Thanks." He sipped it and concentrated for a few seconds on tapping tobacco into a cigarette paper. "Like I say, it got dark fast. We was sittin' around the fire, singin' if we knew the words, drinkin' if we didn't—"

"Spect you didn't know many of the songs, yourself."

"Never could keep the words in my head. Anyhow, the fire was gettin' a mite hot on me, so I turned this deck chair around and settled down lookin' east, fire to my back, watchin' the moon rise over the government forest there—"

"Hold on now. Moon ain't comin' up until after midnight."

"You-God-Damn-right it ain't!" John felt a chill even though he'd seen it coming. Isaac had a certain fame as a storyteller. "That wan't *nobody's* moon."

"Did anybody else see it?" John asked.

"Ev'rybody. Ev'rybody who was there—and one that wasn't. I'll get to that."

"I saw that thing and spilled my beer gettin' up, damn near trip and fall in the pit. Holler'd 'Lookit that goddamn thing!' and pointed, jumpin' up an' down, and like I say, they all did see it."

"It was a little bigger than the moon and not quite so round, egg-shaped. Whiter than the moon, an' if you looked

close you could see little green and blue flashes around the edge. It didn't make no noise we could hear, and was movin' real slow. We saw it for at least a minute. Then it went down behind the trees."

"What could it of been?" the bartender said. "Sure you wa'n't all drunk and seein' things?"

"No way in hell. You know me, Leroy, I can tie one on ev'ry now and again, but I just plain don't get that drunk. Sure thing I don't get that drunk on beer an' wine!"

"And Lester wasn't back with the shine yet?"

"No . . . an' that's the other part of the story." Isaac took his time lighting the cigarette and drank off some beer.

"I'm here to tell you, we was all feelin' sorta spooky over that. Hunkered up around the fire, lookin' over our shoulders. Eric went in to call the sheriff, but he didn't get no answer.

"Sat there for a long time, speculation. Forgot all about Lester, suppose to be back with the corn.

"Suddenly we hear this somethin' crashin' through the woods. Jommy sprints to his pickup and gets out his over-and-under. But it's just Lester. Runnin' like the hounds of Hell is right behind him.

"He's got a plywood box with a half-dozen Mason jars in her, and from ten feet away he smells like Saturday night. He don't say a word; sets that box down, not too gentle, jumps over to Jommy and grabs that gun away from him and aims it at the government woods, and pulls both triggers, just boom-crack 20-gauge buckshot and a .30-caliber rifle slug right behind.

"Now Jommy is understandable pissed off. He takes the gun back from Lester and shoves him on the shoulder, follows him and shoves him again; all the time askin' him, just not too politely, don't he know he's too drunk to handle a firearm? and don't he know we could all get busted, him shootin' into federal land? and just in general, what the Sam Hill's goin' on, Lester?"

He paused to relight the cigarette and take a drink. "Now Lester's just takin' it and not sayin' a thing. How 'bout that?"

"Peculiar," Leroy admitted.

Isaac nodded. "Lester, he's a good boy but he does have one hell of a temper. Anyhow, Lester finally sits down by his box and unscrews the top off a full jar—they's one with no top

but it looks to be empty—and just gulps down one whole hell of a lot. He coughs once and starts talkin'."

"Surprised he could talk at all." John agreed. He always mixed Lester's corn with a lot of something else.

"And listen—that boy is sober like a parson. And he says, talker' real low and steady, that he seen the same thing we did. He describes it, just exactly like I tole you. But he sees it on the ground. Not in the air."

Isaac passed the glass over and Leroy filled it without a word. "He was takin' a long-cut through the government land so's to stay away from the road. Also he had a call of Nature and it always felt more satisfyin' on government land.

"He stopped to take care of that and have a little drink and then suddenly saw this light. Which was the saucer droppin' down into a clearing, but he don't know that. He figures it's the sheriff's copter with its night lights on, which don't bother him much, 'cause the sheriff's one of his best customers."

"That a fact?"

"Don't let on I tole you. Anyways, he thought the sheriff might want a little some, so he walks on toward the light. It's on the other side of a little rise; no underbush but it takes him a few minutes to get there.

"He tops the rise and there's this saucer—bigger'n a private 'copter, he says. He's stupified. Takes a drink and studies it for a while. Thinks it's probably some secret government thing. He's leanin' against a tree, studying . . . and then it dawns on him that he ain't alone."

Isaac blew on the end of his cigarette and shook his head. "I 'spect you ain't gonna believe this—not sure I do myself—but I can't help that, it's straight from Lester's mouth.

"He hears something on the other side of the tree where he's leanin'. Peeks around the tree and—there's this thing.

"He says it's got eyes like a big cat, like a lion's, only bigger. And it's a big animal otherwise, about the size of a lion, but no fur, just wrinkled hide like a rhino. It's got big shiny claws that it's usin' on the tree, and a mouthful of big teeth, which it displays at Lester and growls.

"Now Lester, he got nothin' for a weapon but about a quart of Dade County's finest—so he splashes that at the monster's face, hopin' to blind it, and takes off like a bat.

"He gets back to his box of booze,

and stops for a second and looks back. He can see the critter against the light from the saucer. It's on its hind legs, weavin' back and forth with its paws out, just roarin'. Looks like the booze works, so Lester picks up the box, ammunition. But just then that saucer light goes out.

"Lester knows good and God damn well that that damn' thing can see in the dark, with them big eyes. But Les can see our bonfire, a flick or so west, so he starts runnin' holdin' on to that box of corn for dear life.

"So he comes in on Eric's land and grabs the gun and all that happens. We pass the corn around a while and wash it down with good cold beer. Finally we got up enough Dutch courage to go out after the thing.

"We got a bunch of flashlights, but the only guns were Jommy's over-and-under and a pair of antique flintlock pistols that Eric got from his dad. Eric loaded 'em and give one to me, one to Midnight. Midnight, he was a sergeant in the Asia war, you know, and he was gonna lead us. Eric himself didn't think he could shoot a animal. Dirt farmer (good boy, though)."

"Still couldn't get the sheriff? What about the Guard?"

"Well, no. Truth to tell, everybody—even Lester—was halfway convinced we ain't seen nothin', nothin' real. Eric had got to tellin' us what went into that punch, pretty weird, and the general theory was that he'd whipped up a kind of halla, hallo—"

"Hallucinogen," John supplied.

"That's right. Like that windowpane the old folks take. No offense, Professor."

"Never touch the stuff."

"Anyhow, we figured that we was probably seein' things, but we'd go out an' check, just in case. Got a bunch of kitchen knives and farm tools, took the ladies along too.

"Got Midnight an' Lester up in the front, the rest of us stragglin' along behind, and we followed Lester's trail back to where he seen the thing."

Isaac took a long drink and was silent for a moment, brow furrowed in thought. "Well, hell. He took us straight to that tree and I'm a blind man if there weren't big ol' gouges all along the bark. And the place did smell like Lester's corn.

"Midnight, he shined a light down to where Lester'd said the saucer was, and sure enough, the bresh was all flat there.

He walked down to take a closer look—all of us gettin' a little jumpy now—and God damn if he didn't bump right into it. That saucer was there but you flat couldn't see it.

"He let out one hell of a yelp and fired that ol' flintlock down at it, point-blank. Bounced off, you could hear the ball sailing away. He come back up the rise just like a cat on fire; when he was clear I took a pot shot at the damn thing, and then Jommy he shot it four, six times. Then there was this kind of wind, and it was gone."

There was a long silence. "You ain't bullshittin' me," Leroy said. "This ain't no story."

"No," John saw that the big man was pale under his heavy tan. "This ain't no story."

"Let me fix you a stiff one."

"No, I gotta stay straight. They got some newspaper boys comin' down this afternoon. How's your coffee today?"

"Cleaned the pot."

John stayed for one more beer and then started walking home. It was hot, and he stopped halfway to rest under a big willow, reading a few of the *Nature* articles. The one on the Ceres probe was fascinating; he reread it as he ambled the rest of the way home.

So his mind was a couple of hundred million miles away when he walked up the path to his door and saw that it was slightly ajar.

First it startled him, and then he remembered that it was Lester's delivery day. He always left the place unlocked (there were ridge-runners but they weren't interested in old books), and the moonshiner probably just left his wares inside.

He checked his watch as he walked through the door: it was not quite three. Funny. Lester was usually late.

No Mason jar in sight. And from his library, a snuffling noise.

The year before, some kind of animal—the sheriff had said it was probably a bear—had gotten into his house and made a shambles of it. He eased open the end-table drawer and took out the Walther P-38 he had taken from a dead German officer, half a century before. And as he edged toward the library, the thought occurred to him that the 50-year-old ammunition might not fire.

It was about the size of a bear, a big bear.

Its skin was pebbly gray, with tufts of bristle. It had two arms, two legs, and a stiff tail to balance back on.

The tail had a serrated edge on top, that looked razor sharp. The feet and hands terminated in pointed black claws. The head was vaguely saurian; too many teeth and too large.

As he watched, the creature tore a page out of Fadeeva's *Computational Methods of Linear Algebra*, stuffed it in his mouth and chewed. Spat it out. Turned to see John standing at the door.

It's probably safe to say that any other resident of New Homestead, faced with this situation, would either have started blazing away at the apparition, or would have fainted. But John Taylor Taylor was nothing if not a cool and rational man, and had besides suffered a lifelong addiction to fantastic literature. So he measured what was left of his life against the possibility that this fearsome monster might be intelligent and humane.

He laid the gun on a writing desk and presented empty hands to the creature, palms out.

The thing regarded him for a minute. It opened its mouth, teeth beyond counting, and closed it. Translucent eyelids nictated up over huge yellow eyes, and slid back. Then it replaced the Fadeeva book and duplicated John's gesture.

In several of the stories John had read, humans had communicated with alien races through the medium of mathematics, a pure and supposedly universal language. Fortunately, his library sported a blackboard.

"Allow me to demonstrate," he said with a slightly quavering voice as he crossed to the board, "the Theorem of Pythagorus." The creature's eyes followed him, blinking. "A logical starting place. Perhaps. As good as any," he trailed off apologetically.

He drew a right triangle on the board, and then drew squares out from the sides that embraced the right angle. He held the chalk out to the alien.

The creature made a huffing sound, vaguely affirmative and swayed over to the blackboard. It retracted the claws on one hand and took the chalk from John.

It bit off one end of the chalk experimentally, and spit it out.

Then it reached over and casually sketched in the box representing the square of the hypotenuse. In the middle of the triangle it drew what was obviously an equals sign: ~.

John was ecstatic. He took the chalk from the alien and repeated the curly line. He pointed at the alien and then at

himself: equals.

The alien nodded enthusiastically and took the chalk. It put a slanted line through John's equals sign.

Not equals.

It stared at the blackboard, tapping it with the chalk; one universal gesture. Then, squeaking with every line, it rapidly wrote down:

$$\begin{array}{c} 1 \\ \sim \\ - - 1 \\ \sim \\ 1 \sim 1 - 1 \sim 1 \\ \sim \\ 1 \sim 1 - 1 \sim 1 \\ \sim \\ 1 \end{array}$$

John studied the message. Some sort of tree diagram? Perhaps a counting system. Or maybe not mathematical at all. He shrugged at the creature. It flinched at the sudden motion, and backed away growling.

"No, no," John held his palms out again. "Friends."

The alien shuffled slowly back to the blackboard and pointed to what it had just written down. Then it opened its terrible mouth and pointed at that. It repeated the pair of gestures twice.

"Oh." Eating the Fadeeva and the chalk. "Are you hungry?" It repeated the action more emphatically.

John motioned for it to follow him and walked toward the kitchen. The alien waddled slowly, its tail a swaying counterweight.

He opened the refrigerator and took out a cabbage, a package of catfish, an avocado, some cheese, an egg, and a chafing dish of leftover green beans, slightly dried out. He lined them up on the counter and demonstrated that they were food by elaborately eating a piece of cheese.

The alien sniffed at each item. When it got to the egg, it stared at John for a long time: It tasted a green bean but spat it out. It walked around the kitchen in a circle, then stopped and growled a couple of times.

It sighed and walked into the living room. John followed. It went out the front door and walked around behind the module. Sighed again and disappeared, from the feet up.

John noted that where the creature had disappeared, the grass was crushed in a large circle. That was consistent with Isaac's testimony: it had entered its



invisible flying saucer.

The alien came back out with a garish medallion around its neck. It looked like it was made of rhinestones and bright magenta plastic.

It growled and a voice whispered inside his brain: "Hello? Hello? Can you hear me?"

"Uh, yes. I can hear you."

"Very well. This will cause trouble." It sighed. "One is not to use the translator with a Class 6 culture except under the most dire of emergency. But I am starve. If I do not eat soon the fires inside me will go out. Will have to fill out many forms, may they reek."

"Well . . . anything I can do to help . . ."

"Yes." It walked by him, back toward the front door. "A simple chemical is the basis for all my food. I have diagrammed it." He followed the alien back into the library.

"This is hard." He studied his diagram. "To translator is hard outside of basic words. This top mark is the number 'one'. It means a gas that burns in air."

"Hydrogen?"

"Perhaps. Yes, I think. Third mark is the number 'eight', which means a black rock that also burns, but harder. The

mark between means that in very small they are joined together."

"A hydrogen-carbon bond?"

"This is only noise to me." Faint sound of a car door slamming, out on the dirt road.

"Oh, oh," John said. "Company coming. You wait here." He opened the door a crack and watched Lester stroll up the path.

"Hey, Perfesser! You ain't gonna believe what—"

"I know, Les. Isaac told me about it down at Leroy's." He had the door open about twelve centimeters.

Lester stood on the doormat, tried to look inside. "Somethin' goin' on in there?"

"Hard to explain, uh, I've got company."

Lester closed his mouth and gave John a broad wink. "Knew you had it in you, Doc." He passed the Mason jar to John. "Look, I come back later. Really do want yer 'pinion."

"Fine, we'll do that. I'll fix you a—"

A taloned hand snatched the Mason jar from John.

Lester turned white and staggered back. "Don't move a muscle, Doc. I'll git my gun."

"No, wait! It's friendly!"

"Food," the creature growled. "Yes, friend." The screw-top was unfamiliar but only presented a momentary difficulty. The alien snapped it off, glass and all, with a flick of the wrist. It dashed the quart of raw 'shine down its throat.

"Ah, fine. So good. Three parts food, one part water. Strange flavor, so good." It pushed John aside and waddled out the door.

"You have more good food?"

Lester backed away. "You talkin' to me?"

"Yes, yes. You have more of this what your mind calls 'corn'?"

"I be damned." Lester shook his head in wonder. "You are the ugliest sumbitch I ever did see."

"This is humor, yes. On my world, egg-eater, you would be in cage. To frighten children to their amusement." It looked left and right and pointed at Lester's beat-up old Pinto station wagon. "More corn in that animal?"

"Sure." He squinted at the creature.

"You got somethin' to pay with?"

"Pay? What is this noise?"

Lester looked up at John. "Did he say what I thought he said?"

John laughed. "I'll get my check-book. You let him have all he wants."

When John came back out, Lester



# ROBERT E. HOWARD'S CONAN

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The first volume, *THE HOUR OF THE DRAGON*, appears this August with a special pull-out, 4-color poster—all for \$1.95.

WATCH FOR  
THE PEOPLE OF THE BLACK CIRCLE IN SEPTEMBER  
AND RED NAILS IN OCTOBER.



was leaning on his station wagon, sipping from a jar, talking to the alien. The creature was resting back on its tail, consuming food at a rate of about a quart every thirty seconds. Lester had showed it how to unscrew the jars.

"I do not lie," it said. "This is the best food I have ever tasted."

Lester beamed. "That's what I tell ev'body. You can't *git* that in no store."

"I tasted only little last night. But could tell from even that. Have been seeking you."

It was obvious that the alien was going to drink all three cases. \$25 per jar, John calculated, 36 jars. "Uh, Les, I'm going to have to owe you part of the money."

"That's okay, Doc. He just tickles the hell outa me."

The alien paused in mid-jar. "Now I am to understand, I think. You own this food. The Doc gives to you a writing of equal value."

"That's right," John said.

"You, the Les, think of things you value. I must be symmetrical . . . I must have a thing you value."

Lester's face wrinkled up in thought.

"Ah, there is one thing, yes. I go." The alien waddled back to his ship.

"Gad," Lester said. "If this don't beat all."

(Traveling with the alien is his pet trebblig. He carries it because it always emanates happiness. It is also a radioactive creature that can excrete any element. The alien gives it a telepathic command. With an effort that scrambles television reception for fifty miles, it produces a gold nugget weighing slightly less than one kilogram.)

The alien came back and handed the nugget to Lester. "I would take some of your corn back to my home world, yes? Is this sufficient?"

The alien had to wait a few days while Lester brewed up enough 'shine to fill up his auxiliary food tanks. He declined an invitation to go to Washington, but didn't mind talking to reporters.

Humankind learned that the universe was teeming with intelligent life. In this part of the Galaxy there was an organization called the Commonality—not really a government; more like a club. Club members were given such useful tools as faster-than-light travel and im-

mortality.

All races were invited to join the Commonality once they had evolved morally above a certain level. Humankind, of course was only a Class 6. Certain individuals went as high as 5 or as low as 7 (equivalent to the moral state of an inanimate object), but it was the average that counted.

After a rather grim period of transition, the denizens of Earth settled down to concentrating on being good, trying to reach Class 3, the magic level.

It would take surprisingly few generations. Because humankind had a constant reminder of the heaven on Earth that awaited them, as ship after ship drifted down from the sky to settle by a still outside a little farm near New Homestead, Florida: for several races, the gourmet center of Sirius Sector.



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# THE APOCALYPSE OF HARRY JONES

**ROBERT BORSKI**

A TOUGH, MOODY TALE OF  
ONE MAN'S FIGHT TO  
SAVE HIS WORLD



an enormous amount of self-satisfaction, and decided to buy himself a drink as a result. He scratched another tally on the wall under *Harry Jones* (the space under *Gregor Samsa* remaining conspicuously empty), then hastened down to the street before the Arab innkeeper could come wheezing up the stairs and threaten to have him thrown in jail.

It was a hot day with no breeze and the dry air seemed to constrict the muscles in his head even more than the cloying spice for which Zanzibar was famous. Harry knew of only one cure: a simple by-product of fermentation that also helped to while away his boredom. Consequently, it wasn't long after his arrival at el Zaman that he found himself hoisting a few to his good friend, the late great Bug.

Finishing off his eighth *pombe* he ordered another, this time asking the barkeep if it might be possible to pour him one that was only lukewarm instead of room temperature. The barkeep thought this was terribly funny and set the sloshing liquid before him with a grin that emphasized his more prominent dental caries. Two more beers and Harry thought it was damn funny himself. He was well past the point where last night's hangover had been neutralized when one of the whores who frequented the place, a tall mulatto named Khamisi, began to lean up next to him in her daily attempt to persuade the pilot-adventurer to fly almost due north, to the equator and the 40th meridian, to see where the power cable from the orbiting solar energy station grounded down to provide electricity for the entire East African Community.

"Police, Harry, you would teck me, I be most hoppy," she said, pressing herself up against him so he could feel the tautness of her breasts. "Really, I would."

Harry tried not to smile like a sot. For as long as he had been in Stonetown (by most estimates far too long for posterity's sake), it had been the whore's contention that she could not think of herself as a woman of the night until she had seen the 30,000-kilometer tether snaking down from the sky and that any man who could show her such a sight would be most favorably rewarded. She repeated this claim again now (with a flair for body English that made up for her oral deficiencies, Harry observed) and her dusky warmth assailed him like

a perfume.

"But what makes you think Harrison Morgan Jones or any other man doesn't prefer simple women to worldly ones?" he asked when she leaned back. He liked the Zanzibaress. She was not what he would call pretty, but in the dark bar, under favorable lighting, she plied her femininity to best advantage and managed to conjure up an aura of desirability. Besides, he was drunk. "Worldly women never seem satisfied with what they have, while simple women are content to surround themselves with illusions and live out their lives in placidity."

Khamisi responded to this particular bit of wisdom with a pout. "I know what dat means. You woan teck me, huh?"

She turned her back to him and drank off her own *pombe*, looking the part of a woman scorned, a role that Harry had seen acted out with little variation on five different continents. Still, as she continued to avoid direct contact with his eyes, he felt the return of an old ache and considered once again flying up to Kenya, as well as its alternative: *telling* her he was going to fly her up there. Despite the fact his working immunity against syphilis had reached its three year terminus and the heat made it impossible to thrash about more than a few frantic seconds, he knew he wanted her badly enough to warrant both of these considerations. But in the end a combination of Newton's first law of motion and the same lack of *elan vital* that had kept him bound to the coral island of Zanzibar for the past four months prevented him on one hand from saying, Sure, tomorrow, at dawn; let's fly up there, while on the other an exaggerated sense of honesty made it impossible for him to make a promise he knew he could not keep.

Sighing, he decided to use a familiar tack. "I would be very glad to take the voluptuous lady were it not other than the fact I'm still wanted in Nairobi for, ah, certain indiscretions and the border contingency knows my plane. And even if they didn't shoot us down the ion flux which surrounds the Great Cable and keeps the curious out, distorts the refractive qualities of the air and you can't see much of it anyway." He tried to sound convincing, despite the fabrication involved with the last half of his excuse: beating a retreat out of Somali on an arms-smuggling flight three years

The first time he heard anything about the elephants dying he was in Zanzibar, on his way to a good drunk at a tavern called *Ahkir el Zaman*. It was late in the evening when the ranger singled him out; in typically good drunk fashion Harry remembered little, if anything, about their conversation on waking up to oblivion the next morning.

Crawling out of bed, he was dimly conscious of the heat, as well as the first throbbings of a headache brought on (he suspected) by the fragrant stink of cloves that permeated the island. He fumbled his way over to the washbasin which doubled as a *pissoir*; opening his eyes on the return he saw a big cockroach scurrying across the floor. "Mother of God," he yelled, and scrambling for the pistol he kept under his pillow he shot the nightblack insect before it could get away. Later he would have to haggle with the fat hosteler about damages ("This is extortion, you know. The son-of-a-bitch was trying to eat me, and a man's got a right to protect himself."). But for now Harry felt

ago he had seen the sky-hung power line as well as the cab which rode it up and down from the desert to the several kilometer-long satellite locked in geosynchronous orbit above its ground end.

Khamisi, however, still remained unsatisfied (he pictured her thus in bed although he was quite sure she could fake an orgasm with the best of her kind), but whether it was because of overfamiliarity with his ruse or because she suspected he did not find her desirable enough to make the six hour flight to the Bilesha Plain and back he did not know. He was about to make a conciliatory motion of offering to buy her another drink when the barkeep began to yammer in Swahili and turned up the radio.

Harry thought the man had either gone crazy or wanted to hear some song he favored. But as the djellaba crowd in the corner suddenly hushed he noticed that what had only seconds before been tinny music (noticeable more in its absence than its resemblance to chicken squawking) had now given way to something about the forced evacuation of Tanzania's western third late last night: from the low whispers of those around him it appeared he was listening to an emergency bulletin out of Dodoma, the inland capital.

"... because the ministry of science has determined some danger can still be expected if the current rains do not precipitate out most of the crude radiation," the announcer continued, "martial law is being declared for the rest of the country as well. Citizens are hereby advised under promise of arrest to remain in their local *Ujama* or townships until further testing can be done. It is believed at this point that a rupture in the earth's crust near the Kivu testing grounds is responsible; but until the Zairian Republic decides to confirm the leak we must not rule out other possible sources of contamination, including those emblazoned by the banner of war or terrorism." The speaker concluded with a small reminder of how the Tanzanian government, as usual, was doing everything possible to insure the safety of its beloved people. Then "... grickagrak squawk." The tinny music returned even as Harry finished digesting the bulletin.

At once the thin blue haze of el Zaman swirled with a dozen excited voices. Harry barely noticed their feverish intensity or panicky edges, however. There was a short, broad man on his mind that he was trying to recall

out of his own haze. A ranger who had accosted him last night in an effort to buy his services as a pilot. For some reason Harry remembered (or imagined) the man as being quite desperate.

"I need a ride into the continent, as far as Serengeti," he had said. "But it has to be tonight. Tomorrow will be too late."

Too drunk to fly at the time, Harry had not been quite drunk enough to think he could handle it anyway, despite the large amount of money the ranger had offered him. His one suggestion: "Ask me tomorrow, maybe I'll do it then."

But the ranger had been persistent. "Don't you understand? Tomorrow will be too late. If I want to save my elephants I have to get back tonight or they'll be doomed."

Harry strained to remember his reaction on hearing this or what became of the ranger; he also felt there was something additionally memorable about the man. But with the latter's futile argument his memory track blurred, softening into fuzziness, and only resumed clarity again with his waking up in bed. It was while he was trying to reconnect himself with these lost segments, however, that the broadcast about the radiation leak, the weather patterns over Lake Victoria this time of year, and the ranger's haste to return to the world's largest animal preserve all seemed to fuse into one huge interlocking whole as suddenly satori came and set him to trembling.

Harrison Morgan Jones set down his fermented mash of millet just in time to free his arms for Khamisi's earnest rush to his chest. "Police, Harry, I'm so frightened, you must teck me awesh ..."

The tightness of her hug made it very difficult for the pilot to break away; having to say good-bye (one of the social amenities at which he had never been any good) and knowing he would never see the Zanzibares again was little better. But drawing himself back from the woman he now suspected he liked more than he was ready to admit, Harry kissed her on the forehead and tried to smile.

"I wish there was some way I could explain to you what I have to do," he said, making a concentrated effort not to slur his words. "But I'm not even sure I could explain it to myself." He shrugged as if to say sometimes life was like that; before his resolve could falter he started for the street, stopping only

long enough to turn around and say, "Hey, it's been nice, you know."

The hot sun was intense enough to stagger him; but as it declined in the west and his shadow lengthened, Harry found sobriety. He settled the bill for his room and damages with the smiling Arab hostler. Still later that evening, as the Pleiades swung up, he took off for the plains of Serengeti.

Flying over the great shadow of Africa, an hour into his flight, Harry Jones found himself piloting two tracks: one internal, one external. The obvious one through time and space was a direct linear course he navigated by instrumentation and years of experience. Once he was airborne its relative simplicity allowed him to look out into the somnolent dark, see nothing to trouble him and then retreat within, to begin his second odyssey. This was a solo unlimited by the twin frontiers of his running lights and designed to take him back over the distance of himself in an effort to understand his four-month drunk in Zanzibar, as well as the particular metaphysics involved. As Harry had once tried to explain to a glorious brown woman he had made his lover in Cape-town several years ago, "Liquor may be some people's hell, but it's sure not mine." Then winking: "At least not while I still have an option on purgatory."

In the previous decade there had been only two descents into the almighty binge and each had been triggered by what Harry saw as singular events. In 2004, while working on the Kilimanjaro Project, diverting glacier ice for irrigation purposes, he had learned his father had died of emphysema. The grief he had felt was bad enough; but in addition to this the letter from his sister (Harry's sworn nemesis ever since he had punched out her sniveling loudmouth husband), by mentioning how their father had called out for him on his deathbed every day until he expired, had mined his guilt as well and left him broken and haunted for nearly six months.

He recovered from this in time to work the fifth summer of the new century on the Serengeti Ark mission and help to collect/drive the various animal hordes involved with the closings of the preserves at Tsavo West, Manyara and Ruaha, but four years later, in Kampala to celebrate the anniversary of Idi Amin's assassination, he was impotent for the first time in his life and spent his subsequent birthday (number 39) not

only bemoaning the lost glory of his youth, but also that of his manhood, with plenty of booze to help evoke the necessary pathos. He did recover, however; and again he returned to working for whomever needed his services. The problem was trying to figure out what had happened between then and now. Or was it?

As Harry banked and began to fly in a more northerly direction, an old phrase from his gun-running days came back to him: *Epwo m-baapokin ingitin'got*. Long a favorite of the people who dwelled below on the Masai Steppe, in the original version it was always spoken blithely, with little trace of resignation; a universal stricture that was best paraphrased in English by "Everything has an end." Harry admired the Masai for their enlightened position in this regard, but could still only embrace the same concepts of stasis and transition with what might be termed the mental counterpart of a sigh. Too much of Africa had changed in the short quarter of life he had spent trying to live out his Hemingwayish fantasies; a heritage he saw as incomparable for the grandeur of its older rhythms had been and was being systematically abandoned to make way for the future. Already the jungles were gone. What primitive people still survived were being harassed by their local governments to settle down and learn how culturally unrefined they were. And the animals that once had roamed the mighty continent were now limited in their haunts to a single preserve by a reclamation program that took ever more land for agricultural pursuits, and were seldom regarded with anything but embarrassment about the past they symbolized.

Harry regretted the various stages of this inevitable metamorphosis with more than simple despair. Like the creator whose soul has withered at the Frankensteinian consequences every new revolution in thought or design must bring, he wanted that small kiss of oblivion that makes forgetfulness possible; to go back and recall the naivete with which he had approached his earliest work in Africa, completely unaware that what he was doing was helping to precipitate his adopted country out of its delayed adolescence as much as anyone or anything else.

Too, he wanted more adventures; what few he had had involved mere scrapes with the law rather than outright displays of courage. And he wanted to shape that destiny of himself he saw as

larger than life, to transcend that certain mediocrity most men are born and slated to die with. But his chances for these were dimming. If not dead, the Africa of Papa was mortally stricken, and all the dreams of those who were enriched by the anachronistic charm of a "dark" continent would soon be so much the poorer. Harry realized this now in words; he was certain he had realized the same in spirit long ago, perhaps even letting the resultant psychic dross accrue to the point where he had had to go to Zanzibar and drink away some time. Distance would give him the needed perspective to say for sure. For the moment there was his flight to be concerned with; Harry began to warble to himself as the placenta of night enveloped him. And only when he managed to wake himself up a little with his damn lousy singing did he realized he shared the uniform darkness with the very elephants he was on his way to rescue.

Harry had little difficulty landing at Seronera despite the fact its airfield was marked out by a mere solitary beacon. Like most pilots who flew night missions, in addition to his regular navigation equipment, he carried darksight gear. The latter was computerized and worked similarly to the tropetum membrane of animals by focusing scattered light. As a result his entire descent from the thin upper reaches of his cruising elevation to the runway below was only slightly more formidable than landing at high noon with lenses of smoked glass on. The ground came looming in two dimensions. Contact, and his wheels screeched. Harry cut his speed with a combination of flaps and brakes. The plane had barely stopped when he jumped out carrying the high caliber rifle he would need for his mission of mercy and salvation.

Immediately he crouched. At the Zanzibar airport there had been guards posted with the declaration of martial law; while it was unlikely the same thing had happened here Harry wanted to take no chances; he could still remember having to run his ass off once—a second round of bullets and he might not be so lucky.

Hunkered down and staring at the far-off end of the runway (it was here he remembered the park's monitoring complex and headquarters were to rise) he waited for a shout or a shot to declare itself. When nothing came after several more minutes he relaxed and stood, drawing a deep breath. At once

he felt renewed as the Serengeti assailed him: the stars revolving in the coal sack sky; the wind laden with the sweet smell of grass; the heat and the insects; the wide-open plain. Had it not been for the colony cylinders Harry sighted drifting in orbit between the Earth and the moon he would have thought Africa's iron solitude or grasp upon the eternal little different from the vista man's ancestors had been presented with so many ancient summers ago. It awed him for a minute; but when the satellite worlds, through their involvement in his strategem, reminded him of why he was here he sighed and moved on, advancing toward park headquarters half-a-kilometer away.

When he reached the building there was all the evidence he needed to deduce the evacuation order had come quickly: the lights were still on, a radio fuzzed the air with static, a large overhead fan rippled the few pages anchored down on a desk. Harry walked through the adjoining rooms shouting, "Anybody here?" several times; when no answer came it appeared the place (if not Seronera itself) was deserted. He gave up trying to imagine the haste and confusion of such an exodus once he found the computer grid he was looking for: its console was less challenging.

A codebook shelved nearby gave him the correct sequence he needed; punching it up he waited for the low resolution map of the park to give him the location of the greatest elephant concentration. This was possible due to the telemetering of every herd's matriarch. Usually after the short rains the elephants would gather up into larger congregations of several herds apiece; a series of green blips in the southeast area of the park (more than he thought possible, in fact) indicated this was so now. Harry fixed the location in his mind after he punched up a directional sequence and the roads he would have to take appeared in red. All he needed now was the one vehicle so essential to his plans and which Harry found out back nestled among a half-dozen jeeps: a battered old refrigerator truck he immediately christened Bertha. It was a near-antique contraption that ran on neither electricity nor metallic hydrides, but gasoline; Harry hoped the old gal still worked.

After filling her up from the appropriate tank of fuel he climbed in and hot-wired the ignition. The rewarding sound of the engine turning over was enough to suffuse him with new strength and for the moment he forgot how

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tired he was or how bizarre his morning was likely to be.

He made sure the safety on his rifle was set and eased the big truck out on the southeast road that led from park headquarters and the Seronera River. Ten minutes later night was thick about him and the only lights he could see were his own. From the coordinates on the computer grid, Harry figured it would be about two-and-a-half hours before he reached the area where the doomed beasts of his apocalypse were waiting out the darkness. He tried to relax as a result; the road being what it was (pockmarked and strewn with small rocks), Bertha jostled beneath him like a robot harlot.

Several times in the course of the next hour his lights were reflected back to him with feral luminosity from the side of the road. Apparently the hot rains had not destroyed everything in their wake and for all Harry knew they had not even fallen here yet. The latter thought was comforting, if delusive; he had taken a calculated risk in coming to Serengeti when there was every chance in the world it was blanketed with radiation. He did not so much mind the sickness aspect; a lethal overdose of anything could always be cured by a quick shot to the head. But the idea of surviving and having some genetic monstrosity crop up in the children he would someday like to sire frightened him no end and made his stomach queasy. He was still trying to exorcise these same mad dreams of thalidomacy when the road bulged up in front of him, erupting into gray.

Harry swerved to avoid the elephant; Bertha crashed into the underbrush.

Immediately the world outside the frame of his windshield jumped out of sprocket and presented him with an epileptic collage of light, dark, brush, grass, sky, dust. Harry was almost dashed from the cab twice. Screaming "Whoa, Mama, whoa," however, he somehow managed to hang on to the steering wheel and pump the brakes, fearing the uneven terrain with his rocks and its stumps would tear out Bertha's guts. Gradually he asserted control over the big truck and pulled it to a stop just short of a huge thicket of thornbush. He sighed, wiped his brow and tore apart his wiring job. When he jumped out with his rifle it was not to look for damages (if there were any he could do nothing about them anyway), but to head back to the road, to see in which direction the elephant had lumbered

off.

Bertha had mowed a wide swath through the underbrush, and once his pupils adjusted to the fastening dark it was easy enough for him to work his way back through the low vegetation. Thorns were a major difficulty; the remains of a rotting stinkbark almost impaled him once. But Harry found the insects which seemed to hunger for his eyes to be the most persistent menace and was constantly waving his hand at them in an effort to fend them from his face. He was still so engaged when he first detected the musthlike odor and stopped his crashing about long enough to hear a thick labored sound of breathing.

Instantly the gnats passed beyond his recognition. The wind rose and fell; it was accompanied by the same sounds of heavy breathing, as well as a leathery whisk. Harry felt a curious dread, refusing to draw any conclusions from the noise and yet was almost certain he knew its origin. He suppressed a crawling sensation at the base of his neck and began to advance on the sixty meters of sparse growth separating him from the road, but only after he made sure the safety was off his rifle.

The wheezing continued to grow in intensity; twice Harry heard a rumbling he took to be the deep intestinal workings of the gray beast he stalked. Threading his way through a final copse of whistling thorn, he was very close to where the noise originated when suddenly the acacia thinned and he stepped out on the road no more than thirty meters distance from the elephant.

Betwisted, as the beast flared its ears, Harry realized his mistake: to be caught in the open by an animal as massive as this elephant would be next to suicidal if the dim intelligence behind that unlikely head decided to charge. He would have time for one lousy shot at the brain; if it pierced the ossified labyrinth of air sinuses, jaw bones, teeth and tusk sockets at exactly the right spot the beast would drop in its tracks. If it missed (the more likely of the two), death would come to him in much the fashion of Gregor Samsa I-IV, as a vastly superior force or great bruise. Harry had little choice therefore other than to take the utmost caution in sighting the huge orbit between the eyes and wait for the elephant to follow up on its ear flaring, normally a prelude to charging in the male.

The beast continued to wheeze; its meaty trunk snaked up and out. Harry

saw the ruddy mucous coating its tip was similar to that which lathered the mouth and surmised this was what was giving the elephant its breathing problems. Somewhere deep inside a hemorrhage was probably erupting. Its most outward manifestation combined at the same time with a dark stain Harry identified as a temporal gland secretion to add an obscenely clownish look to the elongated face and prompted him to shiver. He did not have to be an expert on elephants to know here was one hell of a sick animal. As he redrew on the head (a constant problem owing to the beast's trembling), Harry found himself saddened by the fact that this was likely to be the first of many similar encounters, but was pledged to putting as many of the poor behemoths out of their misery as possible.

Finding the beast's brow again he braced his shoulder for the still-impending kick and closed his left eye. When the enormous cranium steadied for a second he fired.

A sound of slapping meat and the shot echoed like a bark of thunder. Down convulsed the elephant, collapsing onto its legs.

Harry lowered the rifle as the neighboring brush rattled with the animal's fallen-side weight. He would have to work fast now, before the various carrion eaters could arrive and make carving up the pachyderm a dangerous endeavor.

Withdrawing the knife he planned to use in lieu of the cutticator or biopsy punch (this was an improvised plan at best), Harry rolled his pants leg down over his right boot and moved in on the pale belly, which trembled still in a final act of relaxation. The area just behind the massive rear flanks was where he remembered the intestines to be; grimly, as he began his hackwork, he wondered if Noah had felt the same nagging self-doubts in laying out the seasoned keel of his own improbable rescue ship.

Dawn was just beginning to engrave the horizon when Harry finally got the big truck back on the road. Despite Bertha's major advance upon the bush, the damage she incurred was negligible. There were a few superficial scrapes and dents along the underside of the carriage, as well as some weeds that needed untangling from the crankshaft; but in no way was the refrigeration carapace harmed. It was still working perfectly and would (he hoped) continue to do so up until its housed cargo was ready to be



flown over the first half of its journey, to Kenya and the Great Cable.

Sitting inside the cab now, bleary-eyed and chain-smoking his way through the African wilderness, Harry found to his surprise that cargo to be uppermost in his mind. Unique though it was, he could little help but reflect how close it was to the fresh meat Bertha had originally carried in her heyday.

This was back in the *fin-de-siecle* years, when strange chimeras had roamed the plains in search of browse and the good life. The hybrids involved (an interspecific cross of domestic cattle with the eland, the oryx or the buffalo) were being selectively bred to eliminate fencing, shelter, veterinary service and food not readily available to them in the wild, and yet still yield more protein with less damage to the land than simple cows. Bertha had harvested various of these mosaic beasts on weekly runs, returning with her cold storage compartments filled with enough carcasses to victual the small indigenous population of scientists and rangers at Seronera.

Unfortunately, when the breeding experiments were later heralded as the answer to Africa's widespread hunger problem, and the other preserves were converted into enormous game ranches, all but a few of the trucks were withdrawn from Seronera until a new outbreak of sleeping sickness could return some of them to action again. Harry had driven a convoy of the same out among the multitudinous herds to help with the vaccination against tsetse fly. But for the most part since then, the trucks, with their antiquated gas engines, had become little more than amusing relics, condemned to the past by the same dynamic cycles of growth and change already in progress over most of the continent. As Harry jounced up and down with every pock, rut or sizeable stone in the road, the thought of his embracing Bertha as some lost soul-sister or cousin occurred to him more than once; all he had to do was work a bit on the appropriate sigh.

It was not much later when, in stark contrast to the softer hues of morning, the requiem birds were sighted. Little more than vague black graffiti in the beginning, as Harry continued his eastward trundle, they grew out of their pinpoints to literally thicken the sky with terrible strength—hundreds of vultures and marabout storks. Hovering in dark circles above an area obscured to him by the next stretch of road (a slight rise), they seemed to reinforce his worse fears

about the elephants. He knew he was very, very close to where the computer had centralized their major location; the conclusion he was forced to by the presence of all these winged scavengers made him hesitate before he downshifted to tackle the hillock. If the grimness he anticipated was on the other side he wanted to prepare himself as much as possible.

Finally Bertha's gears caught as he eased up on the clutch. The big truck shot the hill; Harry brought her to a halt only after the rise crested out and he could see the awesome panorama below—a sight he quickly realized no amount of preparation could ever temper or diminish.

Stretching on into the distance the scorched plain unfurled its diseased colors of yellow and dun like a map limited to jaundiced extremes. Its rolling expanse gathered in the sky to the north and the south; to the east (gentle hints of purple here), only the threadbare promise of mountains prevented it from running away with the rest of the world altogether. Closer there were the usual number of umbrella thorn and fever acacia dotting the veldt with canopies of shadow. Closer still the elephants: fully up to two hundred of the pachyderms occupied the area foremost and center of Harry's observation point, while at least that many more browsed in independent groups of fifteen or so to their rear and far side. It was the congregation en masse the birds were drawing on (the storks descended in slow spirals; the vultures plummeted and walked their gimpy legs on landing), for roughly a tenth of their number looked to be stricken with the same malady as the elephant he had dispatched only two short hours ago. There were, to be sure, healthier members of the horde foraging in the acacia or showering themselves with dust; and although they looked slightly skittish there were also elephants helping to brace up the uncollapsed sick or trying to raise the fallen with their trunks and their tusks. But their numbers were still badly riddled with couchant and dying beasts.

Watching the bizarre vista Harry was soon overwhelmed by its intensity; his feelings seemed to filter out of the same dusty pall as the sharp detonations of killed wood and the elephant's brassy huzzahs. At first he had been simply dumbfounded at seeing how immense the world could still look to someone of his claustrophobic sensibilities; the sheer plenitude of *Loxodonta* had regis-

tered next and closely reinforced his initial reaction. But it was anger about the senselessness of all these magnificent animals dying of radiation sickness that finally made him twist up inside. In an ever-shrinking world, the elephant, with its destructive eating and raiding habits, had long since become its own main threat to extinction; to help it along this same path seemed not only the obvious transgression against nature, but a callous joke as well. That radiation leak should never have existed, its effects at least should be quickly rectified. But how? Even the most incredible luck would not allow him to pick off with his .470 Rigby the many sick beyond the fringe.

As for driving away the healthier members of the congregation with a combination of rifle shots, horn beeping and truck maneuvering, Harry also had his doubts. He did not want to risk an attack on Bertha for one thing; in the unlikelihood everything went as planned, harvesting the dead animals' intestinal cells (the preferred clonable material because of their easy despecialization and reprogramming) would still involve fighting off the various carrion eaters for the other. He did not have to see more than a few dozen jackals and hyenas slinking in the grass to appreciate the difficulty he would have and soon was for abandoning the idea altogether. But where would that leave him?

Several minutes later Harry had still to hit upon an answer when his peripheral vision blurred with something gray and moving. Quickly he turned to the right, to where his dexter window opened up on a new exposure of the southern plain: elephants ambling here—what looked to be another small herd unto itself, coming to join the congregation. Locked into an easy gait which set their trunks and ears to swinging, they shuffled out of the bleached grassland behind their matriarchal cow, one right after the other, as strange a combination of grace and hugeness as ever a convoy of behemoths could hope to master. Harry counted eighteen members all told; but not until their grand dam began to slow down to a lumber did he first hear, then see the two landrovers bringing up an older "auntie" to the rear and realize the true significance of their arrival. Since it was now apparent some shepherding had been involved with this minor bunch of elephants (his predicating conclusion: not everyone had chosen to follow the evacuation order at Seronera), was it not equally

## APOCALYPSE

possible the other elephants had been forced to gather here as well?

Watching the jeeps and the slower cow close in on the congregation's periphery Harry decided the one sure way of finding out would be to ask the rangers themselves once they finished their flanking maneuvers; perhaps if he could convince them his plan was no crazier than the earlier touted Ark mission they would even be willing to help with its execution. There was a certain beguiling, if dangerous, beauty to this proposal; ignoring its ugly potential, however, Harry refused to be bothered by the fact he had yet to receive the rangers' sanction of his proposal or work them into his stratagem.

The "auntie," meanwhile, continued to take her good-natured time; whether this was because of some infirmity due to age or sickness, to a protection complex in which she saw herself as a guardian for the herd's rear, or simply a refusal to be hurried he did not know. But when her gait degenerated to a slow shuffle and she was received with trumpets from her familial kin the closest jeep swung left, toward Harry and the hill.

One of the two men sitting inside the open vehicle looked to be engaged in a conversation of some sort on the communications rig. The other was driving; Harry knew he had been sighted for sure when the latter acknowledged his hilltop aerle with a lofty wave a few seconds later. He returned the hail in a similar fashion, then watched them continue across the scorched plain, marking their progress against the archipelagos of dried insect goo bridging his windshield. The driver had to circle a devastated tree; his companion was still on the shortwave radio. Perhaps it was because of their concentration on these small tasks that they failed to notice how close the dusty course they were transecting was to the galactic periphery of gray beasts; Harry was also willing to concede that his elevated viewpoint gave him a somewhat altered perspective on their approach. But when a large bull that was bloodied about the mouth and trunk raised its rugose brow and seemed to follow their encroachment with intent he knew the rangers had misread their position for whatever reasons and began to pound on his horn.

A few of the closer requiem birds reacted with a minor stirring of wings. The jeep continued on. Too late Harry realized he should have gone to his rifle; then had he been outside Bertha's cab

when the bull suddenly flared its ears and reared to full height he would have had a near-perfect shot at the bony carriage housing its brain. The elephant was obviously going to charge: trying to enlarge the size of its appearance was only the preamble and lasted a mere tenth of the time Harry needed to vacate the truck and establish his shot. As a result, when the bull abruptly lowered its tusks and broke for the jeep, he was still inside the cab and forced to redouble his honking.

Bertha sounded out beneath him. The elephant gained momentum. Watching it gallop forward Harry wondered how the rangers could possibly be ignoring the frenzied pattern of his beeping. He was about to leap out and make a futile attempt at plugging the beast's heart (by the time it took effect the charge would be over) when the driver finally seemed to realize something was amiss and took a hurried glance over his shoulder. Harry swore he could see the color blanching out of the man's face. There was just enough time on the ranger's behalf for a wild gesture to his partner, then out they both went, flying into the air like imperfect angels, their arms flailing in atavistic-wing fashion. No more than a half-second later the elephant rammed their jeep.

*Swack* and the driverless vehicle tottered, flipped, bounced, then righted itself again; as the rangers came down crumpling into the dust (they were in fact rolling out of their unlikely *pas de deux*), the jeep wobbled off in a totally new direction with little squeaks of tortured metal, the elephant pursuant.

One of the two men came to his feet with a bad limp; his companion ran over to tandem up with the guy. Together they were just beginning to make some progress as a team when another *swack* sent their former means of transportation skidding over onto its side and wrenched a tire free.

Immediately the elephant whirled and raised the meaty cable of its trunk. A long trumpet sounded. Harry could see below the radial tusks a cruel embroidering of blood lipstickting the beast's mouth. Shifting with uncase he did not realize he was revving up Bertha's engine until the bull flung down its mottled prominence and charged the hobbling rangers: as Harry's foot let up on the clutch the bottom seemed to fall out of his stomach. A sickening lurch and the truck was barreling headlong.

The world began to rush into the cab like a kaleidoscopic wind. The sky and

the plain, the trees and the dust, the sun, the birds and the elephants all seemed to curve in from afar and spin right into his brain. Suddenly Harry saw this helical effect as emblematic of his whole problem with change and how to approach its spirals: a choice between Charybdis and a simple metal spring. Either he let his attitude about progress suck him in and spend the rest of his life confined to ever-decreasing circles; or he could capitalize on the potential energy in every compressed coil and try to keep abreast of new developments, hoping to somehow parlay them into his advantage. To brake or continue: this was his prospectus for now as well as tomorrow.

A brief instant later, his decision made, Harry flung open the door. The hill had now leveled out and the rangers were running themselves into view like some strange three-legged congenital twin. Correcting his course made him swerve off to the right; the windshield bloomed with the elephant's giant visage. Harry could feel the sudden beating of his pulse against the steering wheel. Waiting until the last possible second to throw himself from the cab he fixed his mind on the awesome looming head with much the effect of a camera, then jumped out into free air, carrying in his cerebral cortex an indelible impression of his own glass-held image merging with the elephant's ancient face.

As the ground came up from under him and pinwheeled into the sky, the terrible crash resounded like music of the apocalypse. Harry went down in a sprawl at the moment of crescendo. His vague suspicions about how the ruined engines of eternity could not have made more noise lasted only until the earth's black kiss to his head deafened him to the machinery of the world and the plains dissolved with a sweet taste to the peaceful darkness beyond.

Somewhat Harry was not prepared for what he saw on regaining consciousness. Lying on his side he opened his eyes to a distance that did not seem possible inside a colony cylinder, as well as a horizon that should have curved up, not around. There were also a number of dead elephants scattered across the plain like a giant outcropping of gray boulders and this further confused him. Here in space, where the conservationists of the world had managed to lobby aside half of the prerequisite biomass for en-

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YA SEE, NOTHING SUCCEEDS  
LIKE SUCCESS

SHORT STORY

# The Wayward Flight of the Teety-Oh

Sherwood Springer

One day I am knocking off a pizza in Hot Pans Herman's joint on Hollywood Boulevard when who should walk in but Las Vegas Louie, out of Las Vegas, Nevada, and I am surprised to see him dragging so low it is even money you cannot slide the ace of spades under his keister.

"Well, well," I say, "welcome to the cesspool of the cinema makers. What is the good word?"

He straddles a stool and orders one of Hot Pans' mugs of mocha. "If there is a good word lately," he says, "I do not hear it."

Now Louie is a guy who gets around,

and where the action is, it is nine to five you will also find Las Vegas Louie with a piece of it. But blow hot or cold, he is not much for this down-in-the-mouth routine. So I know it must be an A-production bomb which is bugging him.

"Well," I say brightly, "it is always darkest just before dawn, you know."

But Louie just shakes his noggin and looks into his coffee. "If I do not come up with forty thousand potatoes by tomorrow morning," he says, "it is not likely that I will be around to see this dawn of yours." Then he glances my way. "Raymond, it is not possible that you are holding forty thousand potatoes on your person at this time, is it?"

Now it is common knowledge that Raymond Onion has never been known to have even forty thousand pistoolas on his person, much less potatoes, and in fact sometimes I am of the belief that there is not this much scratch on the whole Boulevard. "Why, no, Lou. In fact, with this and that, and blowing the last of my unemployment check on Little Anteater yesterday, I am cleaner than a bookie joint after a raid."

At the mention of Little Anteater, Las Vegas Louie makes a terrible face and puts both hands up to his noggin, and it is plain to see that the mere mention of this beetle must be very painful to him indeed.

"Do not use the name Little Anteater in my presence again," Las Vegas Louie says. "It is this flink which is at the bottom of all my troubles."

By this time I am curious to hear what circumstances put Las Vegas Louie forty big ones back of the eight ball, because he is not such a type as will run up a marker of this size on just a sporting event, unless it is in the satchel, and especially not when such a bucket of bones as Little Anteater is in the event. But I do not have to be impolite and ask him because soon he is telling me gratis.

"You know Dora Delicious (Las Vegas Louie says). Well, we are friendly for some time now, but yesterday I am coming back from Vegas and I discover some monkey is trying to make out behind my back, and in fact he is offering Dora Delicious a proposition which is very obnoxious to me indeed, namely, a wedding ring. Now if there is one thing I do not care for, it is to have a guy go waving a wedding ring at Dora, especially after all the coconuts it costs me to keep her at the Hollywood Plaza. So I look this monkey up and he is nobody but Huntington Rittenhouse Three whose family is down to its last billion. One

## WAYWARD FLIGHT

thing leads to another and I end up busting him in the snoot and telling him what will happen if I hear any more of this affair.

"When I relate all this to Dora Delicious she busts into tears, not because she is losing dear Huntington but because she is losing the engagement ring which he lets her pick out, and which she knows I will not be able to sign the tab for.

"Now if there is one thing that bugs me it is to see a broad bawling, and if there is another thing it is to have her say I am not able to sign the tab for something, especially Dora Delicious. So I immediately want to know where is this sparkler, and if she will tell me and put a stop to all this bawling I will go and pick it up myself. So before you know it I am standing in this high class joint in Beverly Hills looking at a chunk of ice which is so large that I think maybe Dora has sprung her zipper, because if she ever wears it on her finger she will not be able to lift her arm. This guy is telling me not just anybody can buy this piece of property, and when he tells me the tab is twenty thousand potatoes I can see that he is right, at that.

"Now at this time I have only a bill or so in my pants and another three, give or take a buck, in Crocker's Potato Bin on the Boulevard, which no ways adds up to twenty G's, but, as anybody can tell you, the word of Las Vegas Louie is as good as his bond, and if I tell Dora Delicious I will pick up the tab on this ice I will do just that.

"So I tell the guy that I suddenly forget my checkbook, and before you can say Jack Robertson I am over in the potato bin. Now, as it happens, I also keep a few Vegas counter checks on my body for emergency purposes. It is very easy indeed to write up a check for twenty big ones to myself and sign it J. J. Smith, which is a name I think up at the spur of the moment, and if this J. J. Smith is such a type as will write up rubberish checks to pay his debts is that any worry of mine? Then I take this check over to the window and ask this broad to put it on my account without any delay.

"So, when I get back to Beverly Hills and write up another check for the sparkler and the guy says just a moment please, I know he is going to call up the bin to see whether I am holding this kind of scratch. Well, naturally I am, what with having just deposited such heavy sugar, so the guy comes back and puts the sparkler in its purple plush case, wraps it

up, and thanks me like he is disappointed about something or other.

"Now you are asking me what happens when these checks go into their rubberish routine and the answer is as follows: It will take two days for Number One check to get to Vegas and back with the news about J. J. Smith, and in two days I am such a guy as will dope out a way to put the arm on twenty thousand real potatoes to cover the bite made by check Number Two, especially since I hear Little Anteater this very afternoon is set up for a boat race at Hollywood Park.

"Now if there is one thing I like, it is a boat race, except when I do not get the word on it, so I spread my markers around for the sum of twenty big ones, because it is known by one and all that any such sum when dropped at the regular wager window has a very obnoxious effect on the tote board, and, besides, I hear that Hollywood Park at this time is not accepting markers.

"So there I am yesterday watching the fourth race and feeling everything is coming up rosebushes. Huntington Ritenhouse is taking the wind, Dora Delicious has her sparkler, and I have twenty G's down on a boat race. And since Little Anteater is going off three to one, I stand to lean my weight on the bookies for forty grand myself, which will come in handy for tipping waiters and so forth.

"Now all six jockeys are greased, I am told, and, to make it look good, Little Anteater is supposed to come from behind, so when they get to the first turn and Little Anteater is trailing the field by three lengths I know it is all part of the fun, and I speak up as follows: 'Ho hum.'

"At the half mile pole he is only trailing by two, and as anybody can tell you, that is known as coming from behind, but I am beginning to wish that he would begin coming from behind a little faster, especially since Milady's Pill, which is in the lead at this time, is about ten lengths up the track.

"Sure enough, at the three quarter pole Little Anteater is still picking up ground, as they say, and is now only one length behind the fifth horse, and he is a cinch to win it all if Milady's Pill and the other four horses all drop dead in the stretch. This does not happen, however, and at the wire Little Anteater manages to get up neck and neck with the fifth horse, and I will be the last to deny that this is coming from behind. But I am thinking that whatever clowns set up this boat race must be under the impression it is for

three more miles.

"And there (Las Vegas Louie says) you have the whole story. I wish to add that now I not only have to put my arm on twenty G's to cover this sparkler bit, but I also need another twenty to pick up my markers which are held by some types who are apt to get very impatient if they are kept waiting."

Now no sooner does Las Vegas Louie finish his story than the guy sitting next to me, who is known as Back East for the reason he is always putting the knock on California, begins shaking his noggin, and says as follows:

"This is indeed the saddest story I hear on the Boulevard for a long time. And it is the proof of the pudding that nobody should put his trust in boat races, especially out here. Now back east it is different."

"If you can't put your trust in boat races," Las Vegas Louie asks, "what is there left to put your trust in?"

"Well, if I am not badly mistaken," Back East says, "there is a guy down on Melrose named Forty Winks who puts his trust in tomorrow's newspaper."

"I am not sure I hear you," Louie says. "What good is tomorrow's newspaper?"

"It is very, very good, if you read it today. Especially that part about the racing results."

By this time I notice that Las Vegas Louie's black eyebrows are crowding into each other like they are about to rough each other up, and he is listening more than somewhat. "This might be useful, at that. And where," he asks, "does one get such a newspaper?"

"It is a long story," Back East says. "For as many years as I know him, Forty Winks is a great one for taking a nap, and that is why he is known as Forty Winks. In fact, one night he is crossing Vine Street at the Ranch Market when he is suddenly taken by one of his naps in the middle of the street, and what happens but he gets his noggin run over by one of those Volvos, which goes to show he does not care a hoot where he takes his naps at. Well, to make a long story short, Forty Winks reads a book somewhere that gives you the word on dreams and looking into the future, and so forth, and since a guy who naps so much has a lot of time on his hands, and when you are napping there is not much else to do, so Forty Winks begins practicing to dream like the book tells him. Before long he is getting peeks at tomorrow's newspaper in his sleep—especially after that Volvo runs over his noggin. Naturally, being

interested in sporting events like every red-blooded citizen, he likes to learn what is going on at Hollywood Park today. And this is how he is coming up with some good ones lately."

"This sounds like such a proposition that I might like to look into a little," Las Vegas Louie says. "Where do I find this Forty Winks?"

Back East looks up at Hot Pans Herman's clock which looks like a big pizza pie with twelve slices of pepperoni to show where the hours are, and nods his head. "If I am looking for Forty Winks at this time," he says, "it is five to two he is in a joint down on Melrose called the Johnson Bar."

So this is how it happens that before long I am having a glass of beer with Las Vegas Louie in this Johnson Bar which I must state is doing a classy business for this hour of the morning.

"I am looking," Louie says, "for a person who is known as Forty Winks."

The bartender places one finger over his lips and says, "Forty Winks is in the back booth, but since he has only thirty-two winks so far, it is a matter of life and death to wake him up, and I will thank you to keep your voice down."

Las Vegas Louie and I are impressed more than somewhat and so we wait in line like everybody else until Forty Winks can get his other eight winks.

Sure enough, pretty soon his noggin bobs up and he takes a pencil out of his shirt and scribbles something down on a piece of paper. Then he looks around and smiles, and everyone gets down off his stool and crowds around the booth to get the good word.

"Tax Bite in the ninth," Forty Winks says, "and the beauty part is the price, sixty-nine dollars and eight cents. And Pot Smoker is second."

Well, there is such a pell-mell rush for the door when he comes out with this news that I am not only bowled over on my keister but I am trampled upon, too. In the time it takes to slam down the betting windows at Santa Anita the whole joint is empty except the bartender, Forty Winks, and me and Las Vegas Louie.

"The poolroom down the street," the bartender explains. "It is nothing but a bookie hangout."

"We got all day," Louie says. "The bookies are not going out of business between now and the ninth race. Bring us a beer."

I take a minute or two to dust myself off and find out if I still have all my ribs in one piece, and then the three of us are

sitting in the booth like old speaking acquaintances.

"It is obvious," Louie says, "that you are a guy with a great talent. I am interested to hear about it."

Now it is 100 to 1 that any character who is approached in this manner about his hobby will go into great detail on the subject, and Forty Winks is not such a guy as will lean his weight against the odds.

"You see," Forty Winks says, "ever since I am a very little punk I am a great one for reading books, which is one of the reasons you see me wearing these cheaters. Now if a person reads enough books it stands to reason that sooner or later he is bound to learn something, and this is what happens to me when I get about three feet from the end of the last D shelf."

At this point Forty Winks freshens up his choppers with some beer, and Las Vegas Louie chimes in as follows: "So far, your story is very clear and understandable, but as I am not too familiar with this book-reading dodge I must admit that I am a little in the dark about what the last D shelf is."

"Well, this is the big trouble with persons who read books," Forty Winks says. "They do not have a system. They read this book and that book, and it is much like closing your eyes and picking out a horse by jabbing a pin at the racing program."

"I know a broad once," I put in, "who comes up with some good scores at Santa Anita by using this very system."

Whereupon Las Vegas Louie puts his elbows into a sore place in my ribs and says, "Let us not leave this conversation degenerate in the direction of broads. Let Forty Winks tell about the D shelf."

"Well, when I am very little," Forty Winks goes on, "my father tells me no matter what I do when I grow up, it is important that I have a system. So when I discover I am going to be reading a lot of books it is natural that I decide to apply this worthwhile advice. So, when I go up to the public library on Ivar I look around till I find the shelves starting with A, since this is the first letter of the alphabet and there is no better place to start a system at. Then I take out the first five books, and when I return them I get the next five books and so on, and by and by I am in the B shelves."

"This is indeed a beautiful system," Louie says, "and I wonder why no one ever thinks of it before."

Forty Winks shakes his noggin and

agrees that it is quite a mystery. "Well, at any rate," he says, "here I am almost at the end of the last D shelf, and one of the books is a number called *An Experiment With Time* and the reason it is on the D shelf is because it is written by somebody by the name of J. W. Dunne. It is all about dreams and a proposition called TTO, and I can see it is worth—"

"I do not wish to interrupt your story again," Louie says, "but I do not quite hear you when you say, 'Teety-oh.'"

"Why, it is this way. In your noggin there is such a thing that can put the eye on what happens tomorrow and this thing is called the time traveling observer, and the short for it is TTO. Now in the back of the book it mentions that some guy by the name of John Buchan writes another book called *The Gap in the Curtain* which tells how four characters do some dreaming as an entry, and they use their TTO's to read a whole page of the *Times* which isn't even printed yet. Now it should be plain that if a guy has such a dream and it is the sporting page he sees, it might be helpful if one wishes to lay a little wager on, say, a prize fight or some other sporting event like a horse race."

"It would at that," Louie says.

"But I am wondering what is going on in that library up on Ivar," Forty Winks says, "and if they are trying to put persons on in some manner. I mean, I am long finished with the B shelves, and I never see such a book by any Buchan, and I am beginning to think the library is trying to ruin my system by cheating and not having all the books. Can this be possible?"

"I do not know," Las Vegas Louie says, "but I do know you cannot trust certain citizens these days, and maybe someone ought to look into the matter. But to get on with this business, tell me how you learn this dodge about reading tomorrow's paper."

"Why, it is all there in the Dunne book in black and white. The secret is, you have a pencil and paper handy when you wake up so you can write down your dream, because otherwise you forget it before you even get to the water closet."

"Suppose you do not dream any dream?"

"You always dream, but like I say, it is 10 to 1 you forget it unless you have the pencil ready."

"So how is it you manage to dream about the newspaper?"

"Ah," says Forty Winks, "now you are getting to the crux of the matter. Every



night you think about the newspaper, and especially about the racing page. You close your eyes and concentrate like you are trying for a ten the hard way. Now this TTO is as curious as a pussycat, and sooner or later he begins to wonder what gives with this newspaper you are straining to read, so one night while you are sleeping he hops over into the next day to take a look at it himself. Since he is part of your own noggin, when you wake up you remember what he saw. This is why sometimes when you are in a strange place you get a feeling that it all happens to you before, but it is only because your TTO is slipping you a memory of the future he gets some time ago."

"This is a very interesting thought," Las Vegas Louie says, "and one of these days I may do some thinking about it. But, meanwhile, tell me how you and this teety-oh are doing of late."

"Well," Forty Winks says, "I am just getting the hang of this matter and I am continuing to practice. Some days my TTO does not see any newspaper, and last week I dream of a winner and the horse is not even running anywhere that day. But my TTO slips me five winners so far and no losers, and even if three of them are a little short in the price, who is going to put the knock on a system like that?"

"It would be a foolish thing to do, indeed," Louie says. "Now let us talk about this horse called Tax Bite."

"It is there very plain in the racing results. He wins and pays sixty-nine eighty. Also—" Forty Winks looks at his piece of paper "—he pays twenty-six twenty for place and twelve forty for show."

Las Vegas Louie gets up and shakes hands with Forty Winks and says, "It is a pleasure to hear your story, and if I decide

to place a small wager on this horse of yours I will make certain to include a few potatoes for you, too."

Pretty soon we are over on Santa Monica Boulevard where there is a secondhand bookstore which is run by a guy called Tony the Pony because his real name is Tony DiPonio. When we walk in I remember that we should ask him if he has a book about "A Hole in the Curtain" so we can tell Forty Winks next time we see him.

But right away Louie gets down to business and says, "Give me five G's on Tax Bite in the ninth. On the nose."

Tony the Pony looks all around like he is listening for termites, then he whispers to Louie: "You are not in Vegas now, and the subject you are discussing is frowned upon in some quarters, and I do not wish to feel any heat at this time. Besides which, I cannot handle any of your action, I am sorry to state."

"What do you mean, you cannot handle any of my action?" Louie asks, his face soring up a little. "It seems you are able to handle my action on a beetle named Little Anteater, and that is only yesterday."

"This I well know," says Tony the Pony, "and I will level with you, Louie. The word is passed around that you are tapped out and hurting, and until you come up with a little juice you are no price in this town."

"No price!" Las Vegas Louie's face sours up more than somewhat. "Do you know who you are talking to? I am calling up Big Sig, and then we will see what—"

"I am saving you a dime," Tony interrupts. "It is Big Sig himself who is passing the word."

Louie opens his kisser and then closes

it with a large snap. Then he puts the grab on my arm and we are out of there so fast I forget to ask Tony the Pony about the book for Forty Winks.

"This is a very obnoxious situation," Louie says when we are out on the sidewalk. "This horse is paying almost 34 to 1, and at these odds a little wager of twelve C-notes will enable me to pick up all my markers and fifteen C-notes will establish an honest profit. Now can you think of any place in this town where there are fifteen C-notes which are not doing anything?"

I reach my hand into my pants pocket and my fingers tell me where there is forty-seven cents which is not doing anything, but I do not say as much to Las Vegas Louie. Besides, at this very moment while we are walking along what should we see on the sidewalk but a shadow in the shape of three round balls, and lo and behold we are in front of Uncle Nathan's Santa Monica Pawn Shop.

"You know," Louie says, "I suddenly feel bad about that sparkler I buy for Dora. It has such a cheap, plain mounting."

"Louie," I say, horrified, "you are not thinking of trying to play footsies with Dora's ring?"

"If you look up at the sun you will see that it is post time for the first race, which means that it is also time for Hollywood dolls to be crawling out of the hay, so let us not lose any of this time in conversation."

When we get to the Hollywood Plaza, Las Vegas Louie tells me it is better if I wait in the lobby, so I pick up a paper which no one is using and start to read about what the handicappers think of Tax Bite in the ninth. Now at first when I do not see his name I do not worry, because this is the way it is with \$69 horses, or they do not pay \$69. But when I look at the entries in the ninth race I am flabbergasted because Tax Bite is not even entered in the race, and for a minute I think I even have the wrong paper. But it is today's paper, sure enough, and then I see that Tax Bite is indeed running, but it is the fifth race he is running in, and I wonder how Forty Winks can make such a terrible mistake.

I look at the clock and it is almost post time for the second race, and I think if we are going to get any bets down I better call Dora's room. But, just as I get up, here comes Louie out of the elevator and it is plain to see he is no longer wondering where there are fifteen C-notes that are not doing anything.

On the way down to Uncle Nathan's I



tell him about the mistake Forty Winks makes, but Louie just smirks and holds up this piece of ice as big as a prizefighter's knuckle. "Dora is happy to learn she is getting a fancier mounting for her sparkler," he says, "and this means I am holding again. We have the name of a winner to put the sugar on so what difference is the number of the race?"

"Well, for one thing, the fifth race comes up a lot sooner than the ninth race, and for another thing, if Forty Winks's teety-oh makes a mistake about which race, what is stopping him from making a mistake about which horse?"

"You know something," Las Vegas Louie says, "you worry so much it will not surprise me when you get an ulcer."

At the Santa Monica Pawn Shop Louie hauls out the sparkler, and after Uncle Nathan gives it the double-O with his little glass, there is the usual hemming and hawing that goes on in such transactions. Uncle Nathan wishes to know is there any heat on this merchandise, and Las Vegas Louie hauls out his bill of sale, which he happens to have on his person. Now Uncle Nathan says it may be a poor investment but maybe he will go one G. Louie then gives him a story of great tragedy in the family, and his poor old mother on her sickbed has to have three thousand potatoes to pay a famous surgeon, who is the only one that can operate and save her life. Whereupon Uncle Nathan says that his heart bleeds, but the most he can go is eleven hundred—and if his partner should ever hear of it, it will mean bitter disagreement and the end of forty years of association. Whereupon Louie brings up the other part which he hates to mention, but his poor old mother on her sickbed is also about to be booted out in the street by a big heartless corporation which is about to foreclose on her mortgage, and not a penny less than two grand will save his poor old mother from this unmentionable fate. Now Uncle Nathan takes out his handkerchief and dabs at his eye and says he cannot stand to hear this story one more time. So he will put up fifty more potatoes out of his own pocket, he says. No, Las Vegas Louie says, before he will let the sparkler go for anything less than fifteen bills he will take it over to Honest Jack's on Vine Street, who will give him two G's easy. At this, Uncle Nathan squints at it again and says, well, maybe he can throw in twenty-five bucks for the mounting.

This routine goes on and as everyone can see, Louie is going to have to settle for twelve hundred potatoes which is only

enough scratch to get him even, and will not leave anything for tipping waiters, not to mention a few potatoes for Forty Winks. And besides which, it is now post time for the third race and we are still a long way from Hollywood Park.

Well, just as I predict, soon Uncle Nathan is counting out twelve bills into Louie's hand and then giving him a yellow pawn ticket to go with it, and then we are out on Santa Monica Boulevard looking for a taxicab. Now LA is not New York when it comes to the matter of hailing a taxicab. When you see a cab in LA it already has a passenger in it, and when it does not have a passenger, the LA cabbie is sitting somewhere on his keister and waiting for the telephone to ring. So while Las Vegas Louie keeps his eye peeled for a stray, I drop a dime in a phone booth. Well, soon it begins to look as if it will be coming up the fourth race before we even get wheels, and if this is true it will take a miracle to get to the track in time to get any bets down in the fifth.

But just at this moment a cab pulls up and we are on our way. Now Hollywood Park is not in Hollywood at all, and instead it is in a place called Inglewood which is about a hundred and ten blocks south of the Boulevard and, with all kinds of freeways in LA, it is a mystery to one and all that there is not a freeway where a citizen needs one most, namely from the Boulevard to the racetrack. And the upshot is that a citizen with a few potatoes to wager has to jockey his way through 110 traffic lights if he wants to enjoy these wholesome outdoor sporting events.

Well, I am not going to burden you with an account of all these traffic lights, but the fourth race comes and goes before we cross 75th Street. And when the cabbie drops us off at the grandstand we can hear the announcing system as follows: "The horses are reaching the starting gate. You'll have to hurry." Well, Las Vegas Louie takes off for the hundred dollar window like one of Big Sig's trigger boys is blasting away at him with a John Roscoe, and I do not even know if he beats the bell until some minutes later when the horses are coming down the track. But when he comes up to me huffing and puffing I can see by his show of crockery that everything is OK.

Everything is OK but one, that is.

"Tax Bite is No. 3," Louie says. "How is he doing?"

The horses are coming very fast now, but although I look them all over I do not see any sign of a No. 3.

"Are you sure that No. 3 is not a

scratch?" I ask.

"If No. 3 is a scratch, why do they sell me these tickets?" Louie asks, holding up a fistful.

"Well, somebody is putting us on," I say, as a great roar goes up and the horses clatter past us across the finish line, and it is four, nine and two, in that order, and some of the citizens begin tearing up their tickets while others start toward the payoff windows. But there is no No. 3 among the also-rans, and I turn toward Las Vegas Louie.

"It begins to look as if there is some dishonesty afoot, and I think we should go and demand our money back."

"Wait," says Louie, pointing a finger.

"What is that out there by the duck pond?"

I shade my eyes and sure enough, there is a horse prancing around in the infield down near the starting gate, and three or four persons are trying to catch hold of his flopping reins.

"Do you see the start of this race?" Louie asks.

"Why, as a matter of fact, I do not," I reply.

"Well, if I am not much mistaken, there is our No. 3, who must be trying to take a short cut when he jumps the fence." Then Louie shakes his noggin sorrowfully and looks down at his handful of tickets. "You know, I am beginning to get a feeling maybe this is not my week."

I do not take issue with him at this time because he is having enough troubles already. He is nailed down to the bookies for twenty G's, and he has to come up with twenty more big ones to cover a rubberish check, and now pretty soon Dora Delicious is going to ask what is the word on her sparkler, since Las Vegas Louie now is not able to spring it from Uncle Nathan's safe.

"Well, there is one thing about me," Louie says. "Even in the peak of adversity I am not such a guy as you will ever catch throwing bad money after good. And especially when the bad money is hardly enough to pay our cabbie fare."

"There is always something on the bright side, however," I say while we are on our way back to the Boulevard. "At this rate, Lou, you do not have to pay any income tax for some time, and the way things are I hear some persons are not so lucky."

"Please do not speak to me of income tax," he says. "Personally, on this subject, I do not think it ever pays any citizen to be caught living at his last known address."

Well, finally we come to Vine Street

## WAYWARD FLIGHT

and I get off, and that is the last I see of Las Vegas Louie for some time. But I hear the word that he blows town for a while, and the reason is that various characters are walking around with the purpose of putting the arm on him. And even if my own shoes are a little thin in the part that hits the pavement—a situation in which I discover that a piece of cardboard helps somewhat—I am still happy I am not in Louie's shoes. Especially as I hear that some of Big Sig's boys have a little game they play with a bucket of wet cement. They like to put shoes in it and let it get hard, and since somebody's feet are still in the shoes you can see what fun this game is. After they are tired of playing, they like to drop the bucket—and anything that is sticking out of it—off the end of the pier at Santa Monica.

Well, a couple of weeks roll around and one night I am standing in front of the lunch counter at the Hollywood Ranch Market eating a hot dog when what should pull in to the curb but a brand new Thunderbird. And as Wuxtry Willie, who hawks papers, is handing a *Times* to some gorgeous doll on the front seat, I notice the guy behind the wheel of this funny machine, and who should it be but none other than Las Vegas Louie. And the gorgeous doll, sure enough, is his everloving Dora Delicious, and the sparkler on her pinkie is throwing light like those floods at Grauman's Chinese on premiere night.

Louie sees me at the same time and climbs out of his Thunderbird, and I note that he is wearing new threads that look like they are poured on him by Sy Devore. "Well, well, well," Louie says as he gives me a slap on the back that pushes my snoot in the mustard. "How is my Pithyass?"

Now although I am dying to find out what happens to Las Vegas Louie that he comes up with a Thunderbird and a set of rags by Sy Devore, still I am not accustomed to having mustard up my snoot, and besides, this pithyass business does not ring a bell with me, and has a very obnoxious sound to boot. "I do not quite catch that past part," I say.

"You mean the part about Pithyass?" he says. "Why, Pithyass is another name for good buddy, and I get this word straight from a hack over at Universal that I get sauced up with the other night. He tells me he is writing a picture about these two characters who are the most famous buddies who ever live, and they are called none other than Dayman and Pithyass, and since you stick by me in my blackest hour not long ago, I like to think

you are my Pithyass."

Well, this is quite a speech and I am mollified somewhat, but it still does not tell me how it happens that Las Vegas Louie's feet are not stuck in a bucket of cement at the bottom of the pier in Santa Monica.

"Now there is a little favor which I wish to ask of you," he says, as he reaches into his pocket and hauls out a roll which is large enough to clog up a sewer. Then he peels off a row of centuries and stuffs them into my mitt. "I am pretty busy lately and I do not get around to see Forty Winks again, and I wish you to lay this on him personally. And," he adds as he leafs through the roll till he finds a pair of Andrew Jacksons, "here are a few potatoes for your trouble."

"I will be very happy to oblige," I say, as I put the scratch in my hip pocket which is the one that does not have the hole, "but I do not quite understand why you are making this payoff to Forty Winks for slipping us this beetle, Tax Bite, which not only does not win, but he does not even stay on the track."

"Well, maybe it is better if I tell you the whole story," Las Vegas Louie says, and he turns and flaps his hand toward Dora Delicious who looks as if she is beginning to steam a little. "You see, after we split that day I decide to drop the word that a little desert air may be good for my pipes. But I do not blow at all. Instead, I hole up in a fleabag over on Wilcox and start thinking how I am going to dig up some heavy scratch. Well, it is a fact that some days your noggin is no good for such a route at all, and I decide that maybe it is possible some sauce will get the wheels working, so I send out for a jug, and maybe later I send out for another jug, because before I know it, it is Friday and I do not remember what happens to Wednesday and Thursday. But this is of no importance because suddenly I realize I am still with this yellow pawn ticket from Uncle Nathan, and for a lousy twelve bills he has the lid on a sparkler which sets me back the sum of twenty G's. Now, as you can see, there is some sugar to be made in peddling this yellow pawn ticket if I use my noggin and think of a good story to go with it. Now who in this town, I ask myself, is the best person to do my peddling to, and before you can say Jack Robertson, I tell myself, it is no other than Huntington Rittenhouse Three."

"But," I object, "do you not tell me once that you punch this Huntington Rittenhouse in the—?"

Las Vegas Louie holds up his palm

and stops me right there. "As you say, we do have a bit of fun of this type at one time, but when he hears the story that goes with this yellow pawn ticket, it is three to two that he will be willing to let bygones be bygones."

At this moment, since the hot dogs in front of the Hollywood Ranch Market smell better than somewhat, and Las Vegas Louie is smelling this smell, he orders a pair for the two of us.

"So, to get on with my story," he says, "I call up this skion of wealth and I tell him that my conscience hurts me that I lose my head and punch him in the kisser. And to make amends I am doing him a favor and telling him what happens to me and Dora Delicious, namely, that we have a big flap and she throws my sparkler on the floor and says I am eighty-six for good. Now this sparkler, I tell him, is a very bad taste in my mouth and I decide to get shed of it forthwith, and it is now in Uncle Nathan's Santa Monica Pawn Shop with a tab of only twelve C's. And since it is the selfsame sparkler which he picks out for Dora in Beverly Hills for twenty G's, he can now grab it for a song. And if he goes marching back with it himself to Dora, it is ten to one he can start up again exactly where he leaves off."

By this time the hot dogs are ready and for once I do not smear on so much mustard. Meanwhile, in the Thunderbird, Dora must lean her arm on the horn by accident because it suddenly goes, "Beep, beep," and Las Vegas Louie has to flap his hand at her again.

"Well," he continues between bites, "this Huntington then says it is interesting to hear of my misfortune, and how much is this song I am referring to? I tell him ten G's and when he replies I think maybe he is related to Uncle Nathan because he says, 'I will give you five G's, take it or leave it.' But when I come down to eight and he does not come up a nickel it is plain that he does not know the first thing about business transactions. Why, I do not even get a chance to bring up the part about my poor old mother on her sickbed. And then, since he is of a mind to hang up, I decide to take it, on condition it is strictly in folding money. It is a deal, he says, and soon I am up in his penthouse handing over the yellow pawn ticket."

"Now, with some fresh scratch in my pants pocket, I do not have any time to lose, since it is common knowledge that broads do not grasp these transactions of the business world, and I do not wish Dora Delicious to get wind of what

happens to her sparkler. So I hustle down to the Hollywood Plaza where there is a doll on the switchboard named Rosie, and she is such a doll as you can ask a personal favor of, especially if a sawbuck goes with it. Now when Rosie sees the sawbuck she agrees that as far as her switchboard is concerned, Dora Delicious is out of town for the weekend, and for a few more sawbucks which she will deal out to the other dolls, they will sit in this game, too.

"So next I go down to Uncle Nathan's and ask him as a personal favor to put the stall on any character coming in with my yellow pawn ticket. Sorry, he says, but he is not such a guy as will commit any act which is not lawful and ethical. Then by accident I let the corner of a General Grant peep out under my fingers, and suddenly Uncle Nathan remembers that such valuable merchandise is not healthy to keep in his safe and, in fact, it is in a vault down the street. Since the potato bins will be closed over the weekend he will not be able to get it out till Monday, at the soonest. I am relieved to get such news, and on the way back to my fleabag I purchase a racing form from Willie so I can see what there is in the way of investments the next day, which is Saturday.

"Now Saturday is a great day for chalk horses, what with all those John Smiths out at the track squeezing their deuces, and by the time I read down to the ninth race I am of a feeling there is nothing coming up winners except chalk horses, and if there is one thing which I do not need at the moment it is a chalk horse which pays maybe four to five. Then, in the ninth race, who do I see entered again but our old fence-jumping friend, Tax Bite. Now at first I am about to say, 'Ho hum,' but before I can get to the 'Ho' part I think that it is very peculiar that Tax Bite happens to be entered in the ninth race which is the very race Forty Winks says he is supposed to be in Tuesday. Then I see the name of another horse in the ninth race, and he is such a horse as should win this heat laughing, and suddenly a bell in my noggin begins to go, 'Ding dong, ding dong,' because the name of this other horse is none other than Pot Smoker."

"Pot Smoker?" I say. "It seems I hear this name before."

"Why indeed you are right, and we both hear this name before. Pot Smoker is the horse Forty Winks tells us comes in second when Tax Bite is paying the sum of sixty-nine eighty, only there is so much commotion in the Johnson Bar that day

that I forget to take note of this fact."

"But Forty Winks says his teety-oh reads this in the next day's paper, so how—?"

"Well, I am going to tell you something. It is plain that Forty Winks's teety-oh is not to be trusted when it comes to knowing what day's paper he reads, and I do not believe he even looks at the top of the page to find out. Because when I check the racing form close I see that Pot Smoker does not even run on Tuesday, so how can he come in second? So the facts of the matter are that what Forty Winks's teety-oh is reading is not Wednesday's paper at all, but Sunday's paper, and I am happier than somewhat to learn of this carelessness.

"Now, as you know, I am no price at this time with Big Sig, so I see a high roller friend of mine and I slip him three G's to lay on Tax Bite, plus three bills for insurance so there will be no argument about track odds, and I hope the payoff will make Big Sig choke to death. Then I take my other sugar out to the track on Saturday, and when Tax Bite wins over Pot Smoker, who closes a big favorite at one to three, I make myself a large score indeed. As to the rest of the story there is very little to say. Out in Beverly Hills I pick up my bum check, and when I explain how it is all an honest mix-up they are more relieved than somewhat. And as for Big Sig, he is hurting in his hip pocket when he hears of the score my friend racks up on him, and he is very friendly indeed when I pick up my markers because in addition to the twenty G's, he is also saving a few potatoes on cement, which I hear is high at this time. After this, all I have to do is bail out Dora's sparkler and have it set in a new fancy mounting, and then I check Dora out of the Plaza and the two of us take off for a week in Acapulco. Well, that is about all. Do not forget to give Forty Winks his—"

"Just a minute, Lou," I interrupt, "there is one little part which is not clear in my mind. How is it you are able to bail out Dora's sparkler when it is Rittenhouse the Third who is holding the yellow pawn ticket?"

"Why, maybe it is possible I forget to tell you this part. But it is a part which I do not want to have blabbed up and down the Boulevard, you understand. It so happens that by accident I run into two citizens called Tight Pants and Freddy the Fist, and I hear, with one thing and another, they are not working much lately. Now I am famous for helping out the needy, if I happen to be holding, so I

let it be known to these characters that I wish to play a little joke on a friend of mine, and there is a C-note apiece in it for them if they will persuade him to hand over a yellow pawn ticket which he wins from me in a poker game, and which he no doubt has stashed in his wallet. If they also find some scratch in this wallet that is their own affair, and I do not wish to know about it. Then I let it be known where and at what time they are apt to find my friend, and I remind them that I do not wish him to be roughed up, outside of maybe one little tap on the noggin, which citizens in their profession sometimes find necessary. As for dear Huntington, I know he will be happy to partake in these shenanigans since it is well known that this type is forever looking for new and different tax deductions to spring on Uncle Sammy. So this is how I get back the ticket on Dora's sparkler."

"But, Lou," I say, "how do you know that Tight Pants and Freddy the Fist will not decide to peddle the yellow pawn ticket themselves, especially if they find out it is for such valuable property?"

Now before Las Vegas Louie can reply, Dora Delicious leans on the horn of the Thunderbird again, and this time it is not for just a plain old "Beep, beep."

"It is just possible that Dora is trying to tell me something," Louie says, "so I will have to blow, since we are on the way to Vegas at this time. But to answer your question I may state, first, that Tight Pants and Freddy the Fist are very dependable citizens and, second, there is the little matter of the two C-notes, and, third, I tell them the yellow pawn ticket is for a very old teapot which is in my family for many years, and my poor old mother hands it to me on her deathbed, and it is the only thing in the world which I have to remember her by. Now, I happen to know that Freddy the Fist has a hang-up on this matter, and the mere mention of somebody's mother will bring a tear to his eye, so I have no worries about the yellow pawn ticket."

With this, Las Vegas Louie slaps me on the back again and says, "Well, I hope to see you around." And as I am watching the Thunderbird disappear up Vine Street, I can't help thinking to myself that Las Vegas Louie's poor old mother must spend a great deal of time on her deathbed.

When she is not spending it on her sickbed, that is.



A STORY OF THE PENULTIMATE  
FUTURE OF EARTH'S OFFSPRING

# THE CHILD'S STORY

RICHARD A. LUPOFF

**B**ehold the earth!

Serenely she whirls, gleaming azure and pearl. Her day skies glow clear, dotted with puffs of cloud, here dazzling white and fluffy, here menacingly gray and filled with fury; beneath them fall torrents of rain, blankets of snow. Zephyrs soothe green meadows and fields of wild, waving grain; tornadoes rip tons of soil from its bed and raise it in towering funnels to be spread over distant plains or dropped on rising slopes.

On earth's night side no flame, no light competes with astral lumenation: luna rises and sets, fills and wanes in cold solitude; stars gleam unchallenged in the black bowl.

This is the earth.

Now behold the Ship.

Long she is, and oddly made, this thing, this creature, this friend and aide of mankind, this strange being evolved in the cold and vacuum between the worlds, needing only a visit to the vicinity of some star for replenishment.

Soon she will glide softly to earth. Soon her burden, her masters, her pets, her lovers, her lice will float from her flanks onto the bosom of the planet. She

will leave them then and go to bathe in the photosphere of Sol, turning and writhing in her ecstasy, nourishing and fecundating on the flaming gases of the sun.

And her riders, on the earth, will transact such trivial business as interests their amusing sort, and will await in confidence her return to bear them back whence they came.

She is amused, is the Ship.

Behold her: her flanks are ridged, fluted, her fore end is curved, enlarged, bears sensors attuned to remote inputs on a broad spectrum: gamma, heat, visual and more. Her insides are of raw energies and plasmoid matter. Her form is as she chooses, in part for her own aesthetic gratification, in part for the convenience of the little creatures she is amused to carry.

For their sake she holds a shell of pure force about herself. Without the shell she would be bombarded by deadly radiation, sucked by hard vacuum—of no concern to the Ship, but fatal to her passengers. Instead she protects them: her shield filters the impinging radiation, shunts the harmful components away from her puny friends, holds within an atmosphere under pressure convenient for the humans.

The humans.

Men they are, woman and man and

women and men the children of Man, but no more do they resemble the sapient ancestors who first removed from the planet of their rising, than did those men the equally distant ancestors who first used the tool, the hand, the brain to earn the designation Man.

These humans are of a widespread type. Man is not a standardized breed: from world to world, beneath star and star, where chemistry and ray and gravity's variant produce adapted offshoots men vary. In stature, in configuration, in mass. Furry or bald, huge-eyed or small, sparse or prolific, gross with padding, with muscle, or slim with nerve, yet always Man.

These travelers, favorites of the Ship, are of the type most favored for deep space: a type bred on no planet, a type birthed and living on Ships, journeying from world to world, trading, studying, learning, always returning to their Ship to travel again into the deep.

They are a tall race: twice the height of their remote, brutal forebears, yet not nearly the tallest of men. Their bodies are hairless, their digits nailless, their mouths soft and small; they are well suited to life aboard their Ships, not nearly so well suited to residence on most planets—and yet, sensitive, intelligent, curious, and highly adaptable. They can survive a wide range of en-





vironments with a minimum of heavy gear: the Ships do not like machinery and carry only very little, only very reluctantly.

Many of the worlds of men remember their ancestry; many more have forgotten. Of those who know their origin, some yet possess the great heaving machinery needed to move from planet to planet, from star to star. Some there are who dream yet of following ancient, remembered probes across the great gulfs that separate the galaxies. Some have attempted the journey; some may have succeeded, but no sign has ever returned of their end.

Yet only these tall, hairless men, their skins a tone of muted violet, travel upon the Ships. The Ships will accept none other.

And now these men are traveling to earth. None recalls the last visit of men to earth. Those who travel aboard this Ship own different feelings, different reasons for visiting the world where their species rose. They have feelings, they have reasons, they have reasons for these are still men, women, still Man.

A curiosity, a pure intellect's call to learn.

A yearning, a kind of love.

A deep, bone-felt need.

And in one, a hate.

For these are still men, women, still

Man.

But now behold the earth. The Ship approaches. The men aboard can see the planet now clearly, and her moon more clearly: a globe of breathtaking beauty, cream-yellow, pockmarked, cold and pure and burning with a frigid fire thrown to her by Sol and turned back to the glory of God: to the dazzlement of tear-drawing joy of any beholder; but lacking any beholder, still to the glory of God.

And the earth herself bears as ever she has her works: her mountains, her deserts, her jungles.

Mighty peaks thrust jaggedly through drifting banks of shroud, of pale suspended vapor. Gray cliffs, here aged, softened by the passage of time, there sharp and newly upthrust by the struggled heavings of the living earth. Here lies snow gleaming pale in starlight, bright in sunlight; here lies ice shimmering like flowing streams; and here streams of flowing water shimmer like polished ice.

Flat wastes of sand run beneath howling winds, chilled by starlight moonlight, broiled by daylight. Dunes rise beneath the wind, ridges and depressions appear; there is stillness: they grow hot, cold, again, again. The wind returns, suddenly, terribly: the depressions are filled, the ridges are smoothed,

dunes disappear and others come in their place.

Where there is soil, water, warmth, jungles teem and snap, struggling for nourishment, competing, tree against tree, vine against shrub, for sunlight. Trunks pound upward, creepers writhe, leaves spread hungrily for actinic rays, roots spread and struggle, straining against one another for moisture.

The jungles are filled with motion. The motion of growth, the tropism of light-seeking plants, of moisture-seeking plants, of parasites crawling, climbing, burrowing into their passive hosts. And the flesh-eating plants, tiny insect-traps slapping leaves together on nectar-tempted guests, visitors lured with the promise of a meal, the promise kept, the eater eaten, the seeker sought, the hunter prey.

The insects swarm in their trillions: great dragonflies the like of their own ancestors scores of millions of years in the past; driver ants huge and restless, their mobile prey needing only to step aside, or slither aside, or creep aside, or take to wing; but the unwary, the immobile, plant or infant or cripple, falls beneath mandibles to the nourishment of the horde, and is momentarily forgotten.

Arachnidae, spiders and scorpions and strange, crawling red crab-things



that move clumsily, their shells clacking, down dark-shaded jungle pathways. Those fitted with venom find their nourishment unsuspecting: a quick lunge, a sharp sting, a burning sensation; then dizziness, darkness, half-oblivious living death.

The giant wasp lays her eggs in the still form of her paralyzed victim. Her larvae will dine well.

The multifarious mosquito still sucks its victim's blood; the vampire bat proves nature's repetition of the successful ploy.

Silently, gently. Silently, gently. The dark shape against the moon, the supersonic squeal, the sleeping prey. The quiet prey awakens: a small itch, a small scar, a slight weakness. More food and its body's mechanisms repair the small breach, replace the slight loss. The dumb beast plods onward, unaware of the service it has done.

Snakes, batrachians, and the mammals and birds.

The great cats stalk the forest trails or prowl the terraces of great leafy limbs. The lesser mammals move aside: come not to the quick eye, the sharp awareness of the carnivore. Move aside. Stay aside. Burrow or flee or hide.

The birds scream, the mammals howl, slow reptiles creep from stream to swamp to stream.

This is the earth.

And approaching through the endless not-day, not-night, comes the Ship.

Aboard her, so many men, so many women, so many—others. Ascetics, renunciates, those who have yielded up their sexuality, abandoned their gender on the altar of academe or that of ambi-

tion or that of duty. In this age such an act is common, easy—and reversible.

Behold Guide.

Born a thousand years past, child to spacefarers of another Ship, bearing chromosomes donated by three dozen parents, nated a neuter by consensus of his parents, Guide has spent ten centuries aboard Ship studying the means of telling this long organism the wishes of men.

Se does well. Each man-bearing Ship carries one Guide; the manless Ships envy their sisters and clamor for men when neonates occur. This Guide is the product of careful selection of parents, of patient rearing by his Ship. Se knows well the state required to communicate with Ship. Se often achieves this state; far more often than do most Guides.

Se thinks: after seeing earth se will adopt gender. In a thousand years of observing women, men, neuters, that se would spend a time gendered. It is a mystery, a pain, a gladness that se would experience.

Se thinks: of the genders, se will select the womanly. Se thinks: as woman she would bear child. Not as donor to a Ship's child: she would lie with a gendered male and become impregnated, and bear a child.

When Guide thinks these thoughts his head feels strange, his link with Ship quivers and fails, his body feels an odd and unfamiliar stirring. His belly and his crotch, his belly and his crotch.

Se turns his thoughts back to his tasks. Se wishes greatly to visit earth, to see her pampas and her glaciers and her hills, to walk the ground where his uttermost ancestors stood and worked,

fought and brought forth new life. Se holds his thoughts to his tasks.

Behold Reader.

Taller than Guide, more massive of bone and flesh, more filled with time and experience and cynicism. Reader selected male gender in childhood, in amazingly early childhood. He is male now, proudly flaunting phallus and testicles in the nude society of the Ship.

Rare among Ship men, Reader has spent long periods on planets. His boast is this: on one planet, one world where man's intelligence and socialization have fallen away leaving a brutal, militant maggot-heap of a civilization, Reader landed and stayed, and schemed and frightened, and drew close to the seats of might, and took the seat of the least of the mighty, and schemed and played and rose to the seat of the next more mighty, and promised and betrayed and gained the seat of the next more mighty, and rose to the height of a world, was seen as unchallenged warlord of a frightened world.

And threw over his might, and returned to Ship laughing and braying at the fools he had conquered, and watched his heirs fall out and dismantle his empire and fall into war and die, and their heirs fall out and struggle and lose what trappings of civilization they had yet retained, and lose what learning and culture they had retained, and fall into utter barbarism while Reader laughed and brayed.

Reader's purpose toward earth: silence. He smiles a smile that pleasures no beholder. He will reveal, Reader commits; he will reveal; but not now. His grin is more terrible than a snarl.



Behold the Child.

The youngest person on Ship, as yet flexible, uncertain; born neuter, the Child has opted at times in the few centuries of experience so far to live at times as female, at times as neuter, at times as male.

The Child has visited many planets; they hold for the Child a fascination not like earth's hold upon Guide nor the barbar world's upon Reader. The Child thrives on variety of experience, has visited sandworld and seaworld, snowworld and sunworld, as female, as neuter, as male.

Now the Child visits earth as androgyne.

The Child has done the mating things with all the humans aboard Ship capable of doing the mating things, and not pledged to abstinence. A few of these people withhold from themselves not sexuality but sex: this is a practice they maintain to furnish themselves with enhanced spiritual energy: not to cease the yearnings of the loins but to turn such force elsewhere. To learning, to building, to sight, to enlightenment, to the gathering of strength for great works.

But the Child seeks learning otherwise, through variety of experience. Esh has received some insight which says: experience all, see all, taste all: pleasure of every sort, pain of every sort; take all, give all, be all, have all, lose all, do all. The notion of the Child is that each experience peels away a sheet of ignorance, fulfills and disposes a byte of potential.

Child's purpose toward earth: all. To taste her food and her waters, to breathe her airs, to see her colors, feel her heat

and her cold. To ride her beasts. To clutch the roughness of a tree trunk to shir naked body. To bathe in her seas.

To lie nude upon a polar ice cap beneath a naked sun.

To swim deep in the sea where shir first ancestor floated.

To fuck the earth itself, rod poked deep into hissing hot sand, sucking cold muck, the fur of a great wild cat.

To take a brutal icicle in shir cunt, twisting, screaming.

To live where the first of her line of shir lived.

To die on earth.

For Child, this is all experience. At its end esh notions esh's consciousness will remain, a purified, gleaming rod of pure light, a glorious consciousness that will illuminate all around shir.

After earth, Child notions, esh will return to the neuter, will ride Ship on some future plunge into the photosphere of a sun. This, esh notions, will burn away shir last vestige of the physical, the gross. From this esh will return a pure gleaming immateriality.

All of this is Child's notion.

There are others aboard Ship: Power, Seeker, Sender, Lady, Master, Seer. Others.

All are of human stock; all are of spacefaring stock, of Ship-riding stock, naked, hairless, nailless, tall and slim, intelligent, aware.

Not all men are such, nor are all the peopled worlds worlds of men. God's causation has peopled this world with aware slugs; that, with a collective intelligence of individually motile neural elements; another, with machine analogs of the mind-patterns of a long-ex-

tinct organic intelligence.

Here glows a star, dull and weary, smothered beneath great flat skatlike energy leeches that crawl and suck its feeble heat.

Here swims a thing so tenuous as to defy proof even of existence, detectable only at its own will, only through a sensing of its calculated messagings, its own being invisible, intangible, undetectable.

Here live creatures of beauty transcending description.

Here live creatures of horror transcending description.

Here live Ships: their breeding place, known to them alone, the heart of a star. Here they come not for the restoration of flagged energies, but for the shedding of a dying skin. The Ship herself, old and weary, within her grown another like herself, identical to the last cell-analog of Ship biology and structure.

Emerges the child, raw and naked to the heart radiation of her star, the husk of her mother transformed in the instant of emergence to pure energy, driven out on solar wind.

But aboard the Ship approaching earth, this is unknown; the way of Ships is not to carry passengers on the final journey of emergence and dissolution.

This Ship draws closer, closer to the earth.

Beneath: the seas of earth.

The most ancient home of life on the planet.

The most ancient home of the ancestors of Guide, of Reader, of Child. Of Power, of Seeker, of Sender. Of Lady, Master, Seer.



The seas of earth teemed once with life: unicellular creatures floating near the surface, energized by the warming rays of Sol. Simple plants devouring one another. Primitive animalcules drifting and quivering, eating and being eaten, slowly developing skills:

Speed for flight—and for pursuit.

Armor and claws and teeth—for protection—and for attack.

Nerves and senses—for detection and response.

All came from it. After billions of years the all that had come from the sea destroyed and poisoned and debased its ancient home, the womb from which it had sprung, and the land to which it had climbed, and the air to which it had aspired, and was expelled from its home, its world, its earth.

But life remained in the ruins, life which had lacked the intelligence to foul its home, the arrogance to make itself master over all.

The dominion which God had given to man, man had lost, and in his place remained the fishes and the scorpions, the grasses-and the weeds and the trees, the thorn-roses, the last soaring condors, the gentle cetaceans, the humble loxodonts and the mighty planaria.

Was there now intelligence on the earth?

Ship slowed, drifting slowly the final hours of her journey.

Now she passed close by earth's moon, standing near eclipse by the planet itself. Ship approached from the darkness, curving slowly toward the terminator. Now Ship stood in the dark of luna, now Sol's crown flared over the lunar horizon.

Flames towered and wove, danced in total silence. Aboard Ship, there was a soft gasp as Guide drew in his breath. He had seen stellar corona before, but never such as this. Se turned, seeking one with whom to share the moment: this, of all the ways of mankind, had endured.

At his shoulder, tears of anguished joy streaming from great mauve eyes, the Child.

Guide holds his hands, soft and nail-less, toward the Child, places them on the slim, violet upper arms of the Child. The Child is affected beyond past experience by the sight; shir androgynous sexuality aroused by strange ancestral drives: shir nipples, darkly pigmented, stand erect on small, breathtakingly graceful breasts; shir male parts, innocent of bush, respond equally: scrotum tightened, dartlike penis aquiver.

They embrace, Guide and the Child. Guide, neuter but knowing, gives the Child satisfaction rapidly, skillfully. Afterwards they lie flat, together, in the ridged skin of Ship.

Ship emerges from behind luna, in full daylight drops away from the cream-toned cratered surface. Her passengers watch, some gazing back at the dead beauty of the airless world; more, ahead, beholding the azure and pearl swirling slowly over the surface of the planet.

Slowly, barely perceptibly, Ship drops toward earth. Her course will bring her into a polar orbit, narrowing slowly and more slowly until she hovers over her selected point. The choice of Ships is nearly not to touch any planet: it is a choice of aesthetics, not neces-

sity—these creatures, bred in solar purity, traveling through vacuum, recoil from the touch of soil or of sea.

Ship comes nearly to a halt, her remaining motion so slight as to defy notice by any other than another Ship, yet moving still, for never does any Ship come to total stillness.

She hovers almost unmoving over the southern polar cap of the earth. Never before has she visited this planet, nor does its variety in particular interest her. Planets she has seen aplenty, and never has one pleased her. She visits them for the sake of her pets: it pleases them, Ship humors them. This is the way of Ships.

Within her force shell she is fully aware of the humans who cluster on her skin. Odd beings, but somehow pleasing, somehow gratifying to an odd, uncomprehended need in the strange psyche of Ships—this symbiosis is far from unprecedented in the complex concourse of life within the galaxy. God alone may know what stranger creatures than these tiny sapientia await in more distant locales.

Ship dissolves her force shield. The air that hangs above the polar ice impinges upon her skin: she contrasts it to the absolute fridity of the vacuum she normally occupies, to the energetic radiation of the suns she periodically visits, finds it a mild and balmy stuff but midway between the two bounds of her usual experience.

Ship quivers once in a kind of delicious spasm.

The people who have clustered on her back bound lightly into the polar air. All are naked. Most carry with them





nothing but their capacity for experience. One hefts a small metallic device; Ship feels a small wave of pleasure and of gratitude at the departure of the machine.

The people hold communion.

Some spoke aloud, in the manner of their ancestors: this was the manner of tradition, of ceremony, of the solemn and ceremonious proceedings of the people of the Ship. Others chose to link themselves to their fellows, to share with a kind of intimacy and degree of interchange no spoken word could possibly carry.

Guide spoke first, telling of hir need to see the womb of her life, the womb of her family. The others listened, and nodded; understood, and accepted, and gave their blessing back to hir.

Power spoke. A temporary male, he rose to hover above the others, to show his swollen phallus, to give all an understanding of his need for oneness with the source of the power of men, the first home of men, the place from which rose all of the strength of men.

Child spoke.

Master spoke.

Sender spoke.

Others turned toward Reader, he who had brought from the Ship the thing of metal. He had placed it somewhere, none other knew where; had done with it something none other knew what.

Roughly Reader announced his reason for returning aboard the Ship to earth: the freeing of man from his shackling past. No longer must attachment to any place of birth or growth hamper man's outward vision. No longer must humankind look back, look

downward, look inward; all must be the vision ahead, out, up: to the stars, to the galaxies, to the all.

A sigh went up from the others, a moan, a sob.

All faced outward from the circle of their communion. All moved, silently, from the place of communion. Across ice. Across peaks. Across seas. Across deserts and forests and steppes, sand and earth and grass and waves.

Lord, to a place of great waters towering mightily, a narrow gorge long ripped between razored granite. Ice here, cold salt spray whipped from green luminescent waters, dripped back from slime-coated rocks. A few white fluttering birds struggled against the gale. Below the turbulence great somnolent sea tortoises drove slowly after nourishment.

Lord stood in the air above, arms folded, wind whipping about violet nakedness, feeling.

Sender to a place deep beneath the sands of the greatest of the deserts of the planets. Here the eternal churning of the sand had brought the detritus of the ages, chunks of this and bits of that, fossil and agglomerate and a great pitted chunk of metallic meteorite.

Sender floated in lotus posture, immersed in the sands, feeling the heart of the desert, thinking the meteorite back to its impact on the sands, back through its flaming passage of the earth's atmosphere, back to its long, cold wanderings through the solar system, back to the time of its creation from the debris of a planet long destroyed.

Sender held closed shir eyes—Sender, like the Child, was for the time being

androgynous. Had lain with the Child many times, aboard Ship, loving, teaching, learning.

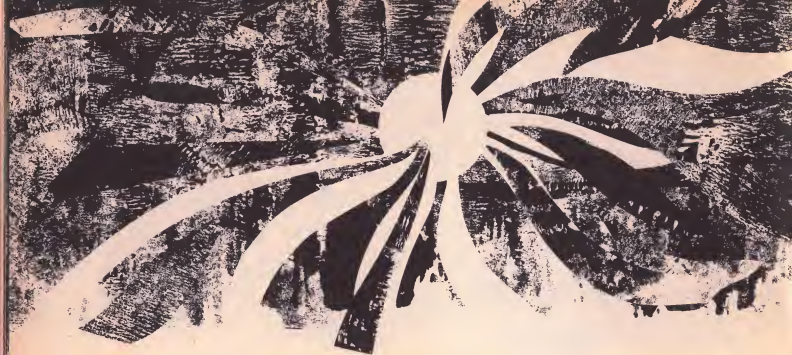
And the Child, arching aflame through the clear sky above a night region had encountered a creature grown from some small ancestor, a great, intelligent, protean flying mammal grown from the bombarded genes of a mouse-like, furry aerial thing.

The flying creature was at first startled, then terrified by the Child. To the creature, this strange being, unfamiliar, unprecedented in its experience, represented threat, peril, death. The creature bared glittering fangs that dripped a brilliant, refractive, hypnotic venom.

The Child extended shir soul to meet that of the creature; shir drew shir hands, long, cool, flexible, through the coat of the flying thing.

The creature turned in the air, desperately struggling to maintain flight, to see the intruder, to protect itself. To the flying creature, the Child gave the appearance of a glimmering spectral light, blue and green and yellow, orange and red and violet, and most of all violet, and somehow calming. The creature's desperate breathing slowed and smoothed. It spread its wings and resumed a smooth flight. It felt the stranger insinuating shirself into its very physical being.

It felt warmth and pleasure, felt its every fibre and neuron touched, examined, caressed; an old injury, a bone once shattered and crookedly knit in one leg, seemed to be warmed to melting, to flow and straighten and heal again. The creature gave a supersonic screech of pleasure and gratitude and soared high-



er, bearing the Child with it and within it.

And beneath the polar ice cap something sank. Some object, rigid, dense, metallic, filled with a searing malevolent energy, a monstrous potential, and with it a male figure, hairless, violet, heavy, massive: Reader, alone.

Through ice undisturbed for aeons, white, solid, frigid, dense, miles in depth. And beneath it solid bedrock, black granite, slumbering away its millions of years of unmoving, uncaring existence.

And beneath the magma, the very mantle of the earth. Here a chunk of solid, dense matter: a concentration of heated iron, near-molten zinc, flowing lead. Here a pocket of ancient uranium, slowly doling out its half-life, turning to lead.

And through all moved the artifact.

And with it moved Reader.

Down, slowly, leisurely, through the earth. Down, steadily, unhurriedly, through rock and metal, through strata of greater and greater density, of greater and greater heat, through matter unexposed to the trivial encrustation of earth's continents, seas, polar caps for uncounted years. For hundreds of millions, for billions of revolutions around the friendly sun.

Down moved the thing.

Down, Reader.

Inside the thing energies flow and whirl: brilliant white.

Beside the thing Reader: rigid, grim, tense.

And soon, in the very center of the globe, they halt. Gravity here is essentially null: there is no down, only up: all

directions are up. The thing is still, and Reader moves, caresses its case, grinning.

The material surrounding the man and the thing is hot, dense, molten. No light impinges upon the thing or the man except the heat-glow of the molten stuff that surrounds them.

Reader does something to the case of the object; his long, dextrous fingers do not open the case but rather they penetrate, they enter the flux of the sheer seething energies within; they perform operations, guide flowing courses of sheer energy, initiate operations, withdraw.

In a span of time measurable in picoseconds the energies within the box emerge like snakes from a carven casket. They writhe and gibber, they expand at a rate little beneath the speed of light. They emerge, they expand, they whirl and twist and grow, and grow, and grow.

A radius away the Child senses the violent event. With astonishing gentleness yet incredible speed esh disengages from the flying creature she had entered; before it realizes that something new is happening esh is gone.

The Child darts through air, earth, rock, metal; finds shir way to the center of the globe, confronts Reader.

They face each other. Less than a nanosecond has transpired. The energies released from the artifact have not yet reached the being of Reader.

The two converse. They meet in the mind. The Child is affrighted, offended, yet puzzled. Esh is agnostic.

Reader is triumphant.

Earth to perish. Man's ancient home

to perish. The birthing place of the race to perish. Man to see not the past but the future, not a pitiable speck but the all.

The Child stands startled. She considers. She reaches a hand toward the artifact. Reader counters, blocks, grasps shir wrist with strong, flexible fingers.

The writhing energies reach toward the two.

Above, others are scattered over and through the earth.

Eight light-minutes away, the Ship bathes in the flaring corona of Sol.

The seething energies contact the flesh of Reader, that of the Child. They sear the flesh, for such it is, still, despite all else.

In less than a second the two are gone. The globe is gone. The earth is no more.

The Ship returns, in her own time, from Sol. Momentarily she is puzzled—where is earth? Where are her people?

But these creatures are strange, she knows. Unpredictable. She understands what they have done, does not concern herself with the reasons for the act.

She moves away, past the solitary globe of luna. She turns from the circling plane of the planets and sets course for a new encounter.

Elsewhere man remains, scattered through the galaxy. Man tall, noble, intelligent. Man coarse, gross, brutal. Man in wild variety. Man whose ancient placenta has at last been discarded.



# BOOKS

by Robert Silverberg

A SCANNER DARKLY by Philip K. Dick. Doubleday, 220 pages, \$6.95.

SOLAR LOTTERY by Philip K. Dick. Gregg Press, 188 pages, \$9.50.

THE BEST OF PHILIP K. DICK. Ballantine/Del Rey, 464 pages, \$1.95.

Suddenly it's Philip K. Dick time all over the publishing industry, and long overdue it is, too. His career now extends over twenty-five years, and during much of that span he has toiled in obscurity and often in downright poverty and personal torment, turning out dazzling short stories for penny-a-word pulp magazines and brilliant novels for \$1000-a-book paperback companies. He has seen his best work remain out of print for five and ten years at a time. He has received one, count it, *one* trophy from the s-f readership in all that time, a Hugo in long ago 1963 for *The Man in the High Castle*, a novel which almost immediately went off sale and remained in oblivion until rescued by an enterprising paperback editor just a year or two ago. Not for him the five-figure advances, the platoons of awards, the nifty multi-volume reissues in uniform format, the guest-of-honor invitations, and all the other little perks that sweeten the lives of some science fiction writers. And all the while Dick has pursued his own dark and desperate vision of the precariousness of life, producing a body of work that for unity of theme and power of human perception is unmatched in science fiction. Somehow he has hung on, through what has been a turbulent and exhausting personal life, continuing to write, continuing almost heroically to turn out his books, supported mainly by the income from sale of translation rights (his books are extraordinarily popular in Europe) and from the all too occasional domestic bonanza.

And now, at last, it is changing. We have a new Dick novel, a hardcover reissue of his earliest novel, and a fine fat paperback collection of his short stories. And, at the same time, at least nine of his books have reappeared in shiny new editions from three or four softcover publishers. At last, he has some visibility and some measure of prosperity, and perhaps now he'll be something more than a writer's writer, an unsung artist known only to the passionate few. For the odd thing about his long sojourn in obscurity is that he's not a literateur, an experimentalist aiming his work at a cultured elite. No, he's a storyteller, whose books (with the exception of a few, notably *The Three Stigmata of Palmer Eldritch*) ought to be readily accessible to the mass market science fiction consumer. Perhaps Dick's commercial failure, up to now, is as much a fluke, an accident of publishing, as it is a function of the terrifying honesty of his work. Honesty on that level sometimes repels the reader looking for easy kicks, but even the more dedicated reader can't pay much attention to a writer whose books are impossible to find.

The short story collection, prefaced by a brief essay in which John Brunner splendidly characterizes Dick's accomplishments—"Reading a Philip Dick story is a highly efficient means of destroying preconceived perceptual sets,"—offers nineteen pieces ranging from Dick's very first, the delicious "Beyond Lies the Wub" of 1952, to his 1974 "A Little Something for Us Tempnauts." Most of the stories date from the 1950s and early 1960s—after an amazingly fertile start as a short story writer, Dick at mid-career shifted his energies almost entirely to novels—and all are familiar from anthologies and from Dick's own previous collections.

Dick as short story writer is something a little different from Dick as novelist, for his novels tend to be piled high with detail—for awhile they were

almost turgid with it—whereas his short stories are graceful, swift, elegantly constructed. But the same preoccupations are to be found here. Dick is, above all else, the poet of paranoia and schizophrenia, and reality refuses to hold still in these stories just as it does in his novels. Such stories as "Imposter," "The Days of Perky Pat," and "Foster, You're Dead" show Dick concerned at the outset of his career with the political and philosophical dilemmas that are the core of his mature novels.

From Gregg Press's series of handsome and sturdy hardbound photooffset reprints of old s-f comes Dick's first novel, *Solar Lottery* of 1955—a kind of van Vogt novel, as Thomas Disch makes clear in his exemplary preface, but a van Vogt that makes some sense, and with a dollop of Kornbluth-Pohl extra-translation. It is written in neat, clean, functional prose, with no trace of the



post-1965 mannerisms that at once irritate and define, and that weirdly over-explicit prose by which, in a welter of gratuitous dependent clauses, he tells his readers (and his characters tell each other) information which is already in their possession or which is not at all necessary to the comprehension of the situation.

*Lottery* is a straightforward, suspenseful, and very 1950ish s-f tale—the characters move against a background of one-note extrapolation: "Suppose the head of the government were chosen by random processes instead of election"—yet Dick's hand is already evident. Perhaps the ironic reversal by which the president is chosen at random while his official assassin-designate is duly elected by a formal convention, is secondhand Kornbluth-Pohl, but the climatic revelation that the dice are stacked even in this randomized society

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# THE MEDIA SCENE *by Charles N. Brown*

Have you ever wondered exactly where all the money thrown around doing a big movie goes? Let's take a mythical atomic submarine movie, "The Silent Seas," which is one of the top ten pictures of all time. It grosses 200 million dollars at the box office, half the amount of the current top show, *Jaws*.

The picture costs 20 million dollars to make, a reasonable price in this era of expensive movies. Theaters take between 20% for first run to 80% for later runs with 50% as an overall average. The distribution company takes 30% of the domestic remainder and 40% of the foreign amount (foreign receipts and domestic receipts are about equal). The total gross receipts to the studio is therefore about 65 million dollars.

Out of these receipts comes the cost of selling (but not distributing) the movie. The bigger items are advertising—about 10 million dollars; foreign taxes and duties—about 2½ million; and the cost of the duplicate prints—about 2 million. Transportation, union payments, etc. take another 2 million, giving a studio net of 47 million dollars. Out of this comes the cost of making the movie (called the negative cost)—20 million, the interest on the borrowed money—about 2 million, and the payments to those involved (gross participation)—about 15 million. The studio's net profit is therefore about 10 million dollars—a hefty sum on a 20 million dollar investment, but not outrageous when you consider that money in the bank doubles in about 7 years of compound interest. So you see that no matter what the actual dollars invested are, the percentage you have for profit is narrow—and more movies lose money these days than make it.

The point of all this is to explain why there will be fewer movies made in the near future. The tax laws were changed recently to destroy the tax shelters whereby investors can write off losses in many cases much larger than their initial capital investment on unsuccessful movies. The net effect is that there will be less money around for borderline efforts—which is what most SF movies are. Less chances will be taken and many projects are being delayed or cancelled.

The SF record scene gets bigger every year and certainly deserves coverage in a media column. Alternate World Recordings (148 East 74th Street, New York, NY 10021) has a series of recordings of authors reading their own work. All are interesting and worth your time and money although some are obviously better than others. Some material is better when read aloud, some is not. Certain authors are better at reading than others. The prize of the AWR releases is Harlan Ellison reading "Shatterday" and "Repent, Harlequin!" said the Tockman" (AWR 6922 \$6.95).

Ellison is a marvelous reader and his material is perfect for reading aloud. On the other hand, Ursula LeGuin reading "The Ones Who Walk Away From Omelas" (AWR 7476 \$6.95) is not so successful. LeGuin's story reads better in print and doesn't seem dramatic enough for reading aloud. The record does contain some introductory material by the author which is very interesting. She sounds more relaxed than in the actual readings. Joanna Russ adds a new dimension to her stories "When It Changed" and "Gleesite" (AWR 6913 \$6.95) in her excellent readings. This one is highly recommended.

*Frankenstein Unbound* (AWR 5911 \$6.95) is a departure because it's a dramatization instead of a straight reading. Author Brian Aldiss reads the linking passages and does a very good job. In general, the dramatizations come off better than straight readings because there is more variety. Even Analog's first recording, *Nightfall* by Isaac Asimov (no number or price listed; available through coupons in *Analog*), works despite a somewhat inept rewrite of a story which depended a lot on pacing for its impact. Asimov is present on the record in an interview with Ben Bova about the original story. Both these dramatizations are worthwhile and I'm looking forward to more of them.

Pelican Records (Box 34732, Los Angeles CA 90034) has issued the soundtrack of *Flash Gordon's Trip to Mars* (LP 2006 \$6.98 postpaid). The sound quality is consistent with the 1938 serial and invokes nostalgia instead of appreciation. Recommended for those

who remember the original with fondness.

Science fiction has invaded the stereo View-Master field with some very effective stereo scenes from "Star Trek," *King Kong*, "Space: 1999," and others. Each \$1.75 packet has 21 stereo pictures plus an illustrated booklet. The stereo effect comes across best in "Space: 1999." Look for these in toy stores. The viewer costs under 2 bucks.

Phil Kaufman, the director of *Star Trek—The Motion Picture*, speaking at a convention in February, said that the script by Allan Scott and Chris Bryant was half finished. Shooting will start 6 months after the final script is accepted—August 1977 at the earliest. Not all the stars have signed yet and Leonard Nimoy is the principal holdout. Paramount hopes to release the film July 4, 1978. They feel that a summer release would be much more effective than a winter one because of the age of most of their prospective audience. The disappointing box office showing of *King Kong* bears this out. Since the stars have script approval, some might not sign until after the final script is in. Mr. Kaufman also mentioned that the Enterprise will be updated and modernized, and that women will be given better roles in the movie.

Meanwhile, Gene Roddenberry has started filming his fantasy movie *Spectre* in England. The on-again-off-again animated version of *The Lord of The Rings* is on again—from United Artists this time. Ralph Bakshi is in charge. Filming has also started in the Virgin Islands on two American International Pictures, *The Island of Dr. Moreau* starring Burt Lancaster and *People That Time Forgot* from the Edgar Rice Burroughs book.

An English stage production of *Iluminatus*, a cycle of five 2½ hour plays put on by the Science Fiction Theatre of Liverpool, has been getting rave reviews since its November opening. It opened in London in March and will probably be there for quite awhile. The five plays are performed on successive nights and then the whole thing is done continuously on weekends. Ken Campbell did the adaptation from the trilogy by Robert Shea and Robert Anton Wilson.



# A Fan's Notes

by Ginjer Buchanan

At my office, a major topic of lunch-time conversation is summer vacation—who's renting a house on Fire Island, who's going to Club Med, and so on. When asked my plans, I'll say, "Well, this year over Labour Day we're going to Miami Beach and next year to Phoenix. In '79 we will go to the British Isles, and in 1980 to either Baltimore or Boston (or maybe Flushing). I'm not sure about 1981 tho. . . ." This usually gives my table companions pause, but then they're non-fans and don't relate to the Labour Day weekend as being anything more than another Monday off work. They have never savoured the unique experience of—Worldcon!

Yes, Worldcon! The beginning (or end, depending on your philosophical turn of mind) of the science fiction year, a celebration and commemoration and confrontation and general all round extended party. Last year in Kansas City at the 34th Worldcon, called MidAmericon, some 2,500 people gathered to meet the Guests of Honour, Robert A. Heinlein and George Barr; attend talks and panel discussions; watch films; see a masquerade competition and an original S.F. play; voice their opinions on a number of items of business (including the selection of the site for the 1978 Worldcon); and present the Hugo



Awards at a banquet to professionals and fans (awards which are voted on by the entire convention membership). And party.

In 1939, at the first World Science Fiction Convention, called Nycon, held in New York City, a number of the active S.F. fans of the day gathered to meet the guest of honour, Frank R. Paul (a noted S.F. illustrator), attend panel discussions and talks, see the legendary film *Metroplis* buy art and other S.F. related material at auction (top price \$8 for artwork and 25¢ for manuscripts) and attend a banquet. And party. Some of them came in costume and although there was no formal business meeting there was a great deal of informal business bickering between two rival groups of NY fans. The site for the next year's convention was decided by the fact that the Chicago club volunteered to host it. The other major difference were that the convention was over the 4th of July weekend and that no awards were presented. Also total attendance was around 150-200!

Thru the next ten years or so the basic Worldcon format took shape. The first official masquerade occurred the next year at Chicon, Worldcon 2; most of these early conventions featured something which could best be described as "Amateur Nite in Fandom" with prom-

inent fans and pros presenting their personal musical compositions, songs, and skits. This was clearly the forerunner of the full scale dramatic presentation. After 1949, Worldcons were always held over Labour Day Weekend, except for those out-of-country. That the convention present some sort of awards was suggested as far back as 1941. In 1953 the 11th Worldcon, held in Philadelphia, finally took up the suggestion and the 'Hugos' (after Hugo Gernsback, the acknowledged father of modern S.F.) were first awarded. Auctions continued apace, with the refinement that the art for sale was no longer used to decorate the program hall, but was rather given its own special exhibit space; thus the art show was born. Also as attendance and convention management expertise grew, folk who wanted to sell their wares, be it used books or unused fanzines, to convention attendees were also given their own space. These people are affectionately referred to as Hucksters and their place of operation became, of course, the Huckster's Room. Business meetings very soon were established as a part of the formal program, seemingly expanding to fill the time available for their completion. Convention politics and the "smoke-filled back room" became a sub-genre of interest within fandom as a whole. Site selection became increasingly complicated, eventuating in a three or four geographical zone rotation system (I'm not sure which because it's changed every year or so), with cities within each zone competing for the bid, which is decided by popular vote of the convention membership. A provision for the regular scheduling of the Worldcon outside North America was also adopted. This has, so far, occurred four times in 34 years of Worldcons.

And the things grew. From an average 200 attendees for the 1939-1949 decade (only really seven cons, as they were not held during the war years) to between 300 and 850 for the next decade to up to 1500 by 1969. The 70's, excepting the two out-of-country conventions, have shown a steady upward increase







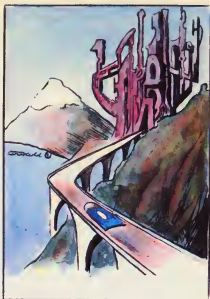
Ron Miller

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which peaked at Discon II, in Washington D.C. in 1974 when 4000 people were registered! The parties have, needless to say, gotten much bigger.

There are those who regret this, and speak with great nostalgia of the first 15 years or so of worldcons, when everybody, fan and pro, really did know one another. (The camaraderie among the 600 or so who journeyed to Australia in 1975 is the only recent example of the spirit of those days.) They may be right. My own personal experience goes back to Baycon, held in Oakland, CA in 1968, with about 1400 attendees. But it's my feeling that regardless of similarities of form, or differences in size or otherwise, each World Convention projects a unique image which is based on the host city, the convention committee, the hotel and to some extent the guest of honour.

Baycon, held about 2 inches away from Berkeley during the student riots over the Democratic National Convention, in a 4 story hotel called the Claremont which mainly resembled a seedy Tara, was, in a word, spacy. It was very much like being caught in a Harlan Ellison story. St. Louiscon, the next year, was midwestern wholesome and will be primarily remembered for having the most impossible hotel and hotel staff in the living memory of worldcons. Noreascon, in '71, was run by the New England Science Fiction Association (N.E.S.F.A.) most of whom impress as having large I.Q.'s and inexhaustible amounts of organizational ability. The con ran *so well* it was boring (almost). LACon, organized by the L.A.S.F.S. (LOS ANGELES SCIENCE FICTION SOCIETY) one of the oldest fan groups in the country, was also very well run but rather than being precision it was slick. Torcon 2, in Toronto, has been to me, so far, the most balanced Worldcon. Some of the same people who ran Torcon in 1948 were involved on the committee, they chose the same Guest of Honour (Bob Bloch) and the weekend was a pleasant blend of the new and the old, the structured and the flexible. Discon II was also a friendly con but erred on the side of looseness (about 2000 more in attendance than expected might have accounted for some of the committees semi-panic tho!) And last but certainly not least, MidAmericon suffered from delusions of grandeur and mid-western "good old boy"-ism, that many people found distasteful. (I'm exempting Heicon and Aussiecon from this list because I believe out-of-country cons are too special for a general discussion) I enjoyed them all.



So, this Labour Day Weekend, as I told my friends at work, I will join an estimated 2500 in Miami Beach to meet Guests of Honour Jack Williamson and Bob Madle (both of whom were at Worldcon I in 1939) and Toastmaster Bob Silverberg. We will attend panel discussions and talks, view films (including Metropolis), see a masquerade competition and possibly a fannish

"dramatic presentation," voice our opinions on a number of issues at the business meeting, select the site for the 1979 Worldcon (almost undoubtedly Great Britain will win) and present the Hugos at the Sunday night banquet. Those who are so inclined will while away hours on Sunday and Monday at the auction, bidding on art they have seen in the general art show. Others will never ever leave the Huckster's Room, except possibly for meals. Some things will go right and some things will go wrong. (The major convention hotel is the Fontainebleau—that should certainly affect the general ambience.) In short, it will be a 'typical' Worldcon. I'm looking forward to it—and to the next 36! Let's see now, The Sea of Tranquility in 2001. . .

Worldcon 35 (SunCon) September 2-5, 1977 at The Fontainebleau, Miami Beach, Florida. Rates:

\$25 attending and \$10 supporting (til July 31,  
\$25 at the door.

Make cheques payable to SunCon, PO Box 3427, Cherry Hill, N.J. 08034  
Worldcon 36 (Iguanacon) Aug. 30-Sept 4, 1978. Write for information: PO Box 1072, Phoenix, Arizona 85001

Color Centerpiece: Saturn As Seen From Rhea

Artist: Ron Miller.

Ron was born in Minneapolis Minnesota in 1947. He graduated from The Columbus (Ohio) School of Art and Design with a B.F.A. in illustration.

While in Ohio he was one of the most outspoken and articulate critics of Science Fiction art, both fan and pro, to have seen print in the fanzines (this writer still smarts from some of his accurately aimed barbs).

Ron is married to Judith Toth whom he describes as, "an all-time Science Fiction masquerade costume winner" and is presently employed in Washington, D.C. at the Albert Einstein Spacearium.

His work has appeared in The Smithsonian Magazine, Astronomy, Galileo, Amazing, several comic book covers and Defenders of Wildlife Magazine.

And herewith is Ron Miller's painting of the awesome silence of the abyss in which swims ringed Saturn.

J. Gaughan



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Continued from P. 13

looks forward to the cynicism of the radicalized Dick of the late 1960s. And in chapter eight Dick offers an actual scene of love, loneliness, and frustrated yearnings (very real—amazingly real for 1955 s-f) that would not have come from Kornbluth, Pohl, van Vogt, or anyone else writing at the time. (Well, perhaps from Kornbluth.) Dick's miserably lonely nineteen-year-old Eleanor is the forerunner of all the girl-women of his mature books.

*Solar Lottery* is, by the way, a book so old that "hopefully" is used correctly.

Dick's latest novel, *A Scanner Darkly*, is obviously a deeply felt personal memoir, the surprising outcome of his experiences in the California drug culture. In a recent interview he declared: "I believe that *Scanner* is a masterpiece. I believe it is the only masterpiece I will ever write . . . because it is unique." In fact, the book is a masterpiece of sorts, full of demonic intensity, but it happens also not to be a very successful novel.

It is, let us note, *not* a science fiction novel however it may be packaged when it shows up in paperback. Ostensibly it takes place in 1986 or thereabouts, but except for some peripheral gadgetry it might just as well be happening in

Southern California this week, and there is no real extrapolative content that I can see. It is written in trendy 1969 slang and in the peculiarly clotted prose typical of post-1965 Dick. It is populated by a cast of zonked zombies; people without pasts, without futures, and with precious little in the way of present; and sad burned-out junkies of no redeeming social purpose except as object lessons on the evils of dope. The book is a tract: its characters indulge in hard drugs, lose their grip, and go under, meeting horrid dooms. At times, it has the lunatic seriousness of high farce, as in the sequence which involves the synthesizing of cocaine from drugstore sunburn spray. (This is in places a very funny book.)

It is full of metaphors of paranoia not to be taken seriously, as when Dick suggests that *all* telephone calls are monitored in taped playback by police officers, a task that would in actuality require a staff of several hundred million full-time agents. It oscillates crazily between these implausibilities and searing insights into the lives of the assorted losers it displays, and though the book is, beyond doubt, something of terrible importance to its author—a testament, in truth—it is such a jumble of levels and techniques that it is hard for the reader to share the intensity of its author's feelings, not when he alternates between distancing us and hauling us into the heart of the turmoil. Page by page, it is dazzling, wildly comic, desperately inventive; but because its characters are going nowhere, the book goes nowhere. Dick thinks he is taking us on a journey through hell, and undoubtedly *he* has been on a journey through hell while preparing himself for writing this novel, but most of the time he's really only fooling around. Although, suddenly in the thirteenth chapter, his protagonist's drug-sodden head finally comes apart and Dick drops all his jittery hasty pop mannerisms and uncorks a dark and somber chapter, enormously powerful and unexpectedly moving, written in straight pure classical prose. It seems almost gratuitously tacked on to what has gone before, but of itself it is a wonder.

And Philip K. Dick is a wonder. His newest novel is a failure, but a stunning failure, and now that so many of his books have returned to print we can see the magnitude of his accomplishment, the true heroism of the man. He has laid himself bare in two dozen novels and a stack of short stories, and he has created a unique, idiosyncratic, instantly recognizable world. He is a great science fiction writer; in his weird fouled-up way he may also just possibly be a great human being.

# lettercolumn

Dear Mr. Hartwell,

Having just sent off for a COSMOS subscription, and in the process again having the occasion to flip through your first issue, I think it only fair that I use up a few minutes to offer a few suggestions for the future (and compliments for the present!).

I have little doubt that COSMOS is the best of the recent new sf magazines, of much better quality than *Galileo* and of considerably better variety and appearance than Isaac Asimov's; and this is meant with no prejudice to these rivals—they aim lower, and are bound to present a lower profile. COSMOS can compete with the best of its distinguished predecessors and, among the existing magazines, with *F&SF*—which I consider the Top of the Pile—despite a slightly ugly logo and inadequate distribution. Logos come and go, but distribution has been the naysayer to a number of similar attempts—something that you and Baronet will have to tackle successfully if COSMOS is to survive. The example set by *Analog* must hold true across the field unless the sf readership expands suddenly (that is, the magazine readership): the sf publication will have to trail behind a chain of high-circulation magazines under the same ownership and feed off their distribution.

Of course, you do have your large-format working for you, and even *Vertex* survived two years on that lone virtue. The debut cover was attractive, if not arresting, and lends an air of conservatism which I would deplore under normal circumstances were it not that sf magazines could use a dose of conservatism to bolster their public image. My only complaint is that it is not particularly faithful to the story it illustrates—the House is made of geodesic domes in the story, with a small *plank* staircase at the entrance, and the whole thing is made of wood (“materials of the forest”). In fact, I rather think it is a good deal prettier than Schelling makes it, and not quite as plastic and unnatural.

The lead Bishop story makes the issue for anyone who is not a rabid Grey Mouser fan (I dawdled in Berkeley's “Dark Carnival” sf store a few days ago, and listened to several people salivate over “Rime Isle,” avidly looking forward to issue two). This is a major

work, of Hugo quality or only slightly below, and much more impressive than Bishop's story in *IASFM* (Summer); for those who have read Bishop's novel “A Funeral for the Eyes of Fire” (and particularly for those who enjoyed it!) it takes on added lustre. Perhaps those who haven't, should. The shorts were unspectacular, as one expects from standard sf magazine filler, although Raylyn Moore's “Strix” is much better than standard—Ms. Moore is a rapidly-maturing writer whose better material in *F&SF* (and now COSMOS) begins to rank with the best. Her narratives are slightly detached, which adds mystery without detracting from the characterization (see her “The Milewide Steamroller,” in many ways similar to “Strix” in construction). Of the other four, two (the Niven and Wilder) were average, two minor, but none—and this distinguishes you from *Analog* in particular—were unreadable. All in all, like an above-average issue of *F&SF*, enjoyable and consistent.

The Center Section, while not as exciting an innovation as you make it out to be, is also comparable to features elsewhere—Silverberg's reviews are better than those he contributed to *Odyssey*. I would stress, however, that science articles are not *necessary* in science fiction magazines, unless you unjustifiably tout yourself as a science fact magazine as well (which you do not). Many may read them; none would complain, I think, if they were omitted; I, at least, would prefer another novellet. Ben Bova complains that he has enough quality material to fill two magazines, then fills only half of one. It's not necessary for his colleagues to put themselves in the same situation.

Sincerely,

Peter Mandler

March 6, 1977

I've at last read COSMOS Vol. 1 No. 1, my dear David, and it's a smasher. You're off to a tremendous start. Congratulations.

The fiction and pieces have a unique quality, mordant and arresting and sometimes a little frightening, but al-

ways entertaining. And your variety is exactly right.

The production is splendid; the magazine is put together with exquisite taste. I admire the layout and even love your logo. The art work is superb, and to have the courage (and the budget) to use color makes me shake my head in wonder.

I shall, of course, subscribe, not solely out of devotion to you but because COSMOS is very much to my taste. I can't enclose my application in this letter because I'm convinced that Vol. 1 No. 1 will become a collector's item in the long future of COSMOS and I don't want to mutilate my copy.

Again, all my applause to the entire COSMOS staff, and to yourself

All my best as ever . . .

Alfred Bester

May 2, 1977

Dear Mr. Hartwell:

In his review of Larry Niven's *A World Out of Time*, (COSMOS, Vol. 1, No. 2), Silverberg writes:

... Niven pulls the mighty planet Uranus, third most massive planet in the solar system, within two million miles of the Earth. Niven . . . says not a word about the tidal disruption that would crumple our world like an omelet in a cement mixer. I don't believe it.


I believe it.

Has Silverberg forgotten that tidal forces vary inversely with the cube of the distance involved? A simple computation which should be within the abilities of Silverberg—and Niven—shows that, if Uranus were moved to two million miles from Earth, then it would exert little more than twice the tidal force which the moon now exerts on us. This is not enough to crumple an omelet, let alone a world!

sincerely,

Jeffrey Farrar Painter





# INTO THE ABYSS

## Terence Dickinson

### To Jupiter and Beyond

Interplanetary robots have shattered our beloved canals of Mars and swamps of Venus. We now know enough about our nearest planetary neighbors to realize that they are worlds unto themselves, more alien than we can imagine. As the remaining members of the solar system come under the scrutiny of the eyes and instruments of the Pioneers and Mariners, we are learning about worlds that we haven't even developed myths about—objects that are mere shimmering dots in the most powerful telescopes.

The planet Mercury, for example, was revealed by Mariner 10 to be a cratered world in many ways similar to the moon. Some of the Mariner 10 pictures yielded resolutions of 100 meters on Mercury. Prior to the mission we were not able to discern an object 100 kilometers across on the planet.

The same thing is about to happen again. Voyager 1 and 2, scheduled for launch this August and September, will course a multi-planet trek that will include Jupiter and five of its moons,

Saturn and eight of its attendant satellites and possibly Uranus and its five moons.

Take an object like Saturn's satellite Rhea which appears as a minute speck in any earthly telescope. No surface features on Rhea have ever been seen. Yet, we will soon have images of this world displaying about 30 percent of its surface to one kilometer resolution—equivalent to the best earth-based telescopic photographs of our moon. And if one of the spacecraft does survive to Uranus, it will encounter a planet and five moons upon which no surface features have ever been distinctly recorded.

Putting past interplanetary probes and dreams of future robot explorers into perspective it seems safe to predict that thirty years from now an impressive document titled *Photographic Atlas of the Planets and their Satellites* will be on library shelves throughout the world, signaling the end of the golden age of planetary exploration. Only the smaller asteroids and a few of Jup-

iter's outer moonlets will likely remain unmapped.

In addition to kilometer resolution imagery of every planet and most of their attendant satellites, surface samples from Mercury, Venus, Mars, and Ganymede probably will have been thoroughly inspected at various earthly laboratories by 2007. A piece of a comet—a chunk of primordial solar system—is another prize that should be in hand by then.

Scrutiny of our neighbor worlds by spacecraft is less than two decades old, dating from that fuzzy lunar far-side photograph returned from Luna 3 back in 1959. As astronomer Carl Sagan is fond of saying in connection with planetary exploration: "The best time to be alive is when you start out wondering and end up knowing. Clearly that era is now—the last four decades of the 20th century."

The exploration of solar system bodies generally proceeds in five distinct stages. The first is the prolonged period of examination by telescopes

from the surface of the Earth, an effort that began with Galileo in 1609 and continues today. A rejuvenation of earth-based planetary observation will accompany the orbiting of the space telescope, a 2.4 meter [94-inch] instrument due to be functioning by 1984.)

The second stage—reconnaissance during flyby—began with Luna 3 and is reaching its peak during the 1970s. Multiple planet flybys used for the Mariner 10 Venus-Mercury mission in 1974 and scheduled for the upcoming Jupiter-Saturn probe significantly increase the yield from this technique.

Stage three is detailed inspection (usually mapping) from orbit. The power of the technique was dramatically demonstrated by Mariner 9 which completely revised our understanding of Mars despite three previous flybys.

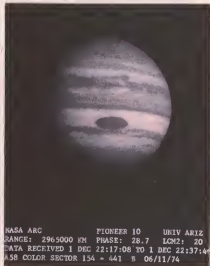
The fourth step in the planetary exploration cycle is a landing by instrumented probe on the surface of the object under study or, if it doesn't have an accessible surface, atmospheric exploration. Venus, the moon, and Mars have undergone this type of scrutiny.

The last step in the cycle (at least from our present vantage point in 1977) is the return of surface samples to Earth from other solar system bodies. The moon is the only celestial object where all five of these exploratory phases have been employed. Presumably the sixth step would be human exploration and colonization, but with NASA considering shelving (temporarily at least) design studies of a future manned Earth-orbiting space station, this sixth possibility seems more remote than ever, particularly in terms of worlds beyond the moon.

The enormous yield from the missions to date has brought us new worlds far different from those we hoped to find. The modern picture of Venus as a scorched and lifeless globe cloaked in a stifling carbon dioxide atmosphere 100 times denser than Earth's air blanket, is a far cry from the swamps and seltzer-water oceans we heard respected scientists describe less than thirty years ago. Mars has gone through the same transformation in mankind's mind. From the intelligently constructed canals popularized by Percival Lowell at the beginning of the century, we now have a world that, although dynamic and fascinating, appears alien in the extreme and probably lifeless.

With Mercury half mapped, Venus' clouds plumbed, and Mars' dirt analyzed, the wave front of exploration is now encroaching on the outer solar system. The fleet was led by Pioneer 10 which hurtled by Jupiter in December 1973 and is now soaring out of the solar

system on an interstellar trajectory that will eventually lead to an infinite galactic journey. A companion craft, Pioneer 11, swooped even closer to Jupiter and was flung by the giant planet's gravity on a precisely engineered trajectory that will bring it close to Saturn in September 1979. These first manned objects to reach the outer solar system gave us our initial glance at a totally alien world.



Jupiter is not a ball of rock and metal like the terrestrial planets; it's more like an enormous drop of liquid hydrogen cloaked in gaseous hydrogen. Jupiter has been called "the star that failed" and "half-star, half-planet." By all descriptions it's a bizarre colossus, dwarfing any standard of comparison familiar to earthlings. Jupiter's visible surface, an endless maelstrom of clouds, is 60 billion square kilometers in area—so vast that if the Earth were peeled like an orange the skin would not quite cover the Great Red Spot. Jupiter's mass, equivalent to 318 Earths, consists almost entirely of hydrogen and helium (about 98 percent) indicating that it contains almost the same balance of elements as the sun, which in turn implies it hasn't changed much since the birth of the solar system. The primal elements dating from our star system's creation five billion years ago are probably all still preserved on Jupiter. If much escaped it hasn't altered the balance, and today the mighty grip of the planet's enormous mass gives a "surface" gravity 2.6 times as great as that experienced on Earth.

Rotating once every ten hours Jupiter has the shortest day of any of the nine planets. Because of its bulk, a point at Jupiter's equator whips along at 35,000 kilometers per hour compared to a speed of 1600 kilometers per hour

for a similar point on Earth. Whirling such an enormous bulk around so fast has created a bulge at the planet's equator giving it an equatorial diameter seven percent greater than its polar diameter of 134,000 kilometers. Information from the Pioneers has provided the first detailed picture of the Jovian structure. A descent into Jupiter's atmosphere is a plunge into a bottomless ocean of air. The entire visible surface is windswept clouds whirled into parallel bands by an atmospheric circulation rigidly defined by the planet's rapid rotation. From a vantage point a few thousand miles above the visible clouds, the scene would be an awesome global quilt of brown, beige, pink, red, yellow, and white bands and swirls everywhere billowing and surging as if being stoked by some Jovian furnace far below.

Jupiter's Great Red Spot, for decades the most conspicuous and controversial feature on the planet, is now believed to be a hurricane-type structure that has been spinning for at least 300 years, like a three-times-Earth-size gear wheel between the counterflowing north and south halves of Jupiter's South Tropical Zone. Recently analyzed measurements from Pioneer 11, which passed the planet in December, 1974, show that the spot's upper surface is the highest cloud feature on the planet, rising some 8 kilometers above the surrounding clouds. At this height, Jupiter's atmosphere has cooled enough that traces of phosphorus in the upwelling atmosphere of the spot condense out, providing the deep red color. The spot has drifted irregularly westward over the years, confirming ideas that it is a product of atmosphere circulation rather than being fixed to one point on the planet. While the gas forming the spot almost certainly rises at the center and descends around the edges, thus dissipating negligible amounts of energy, these motions are too small to measure.

Using a computer model, Andrew Ingersoll of Caltech found that the gear-wheel configuration was the only one that gave a permanent spot. This simulation also gave the spot pointed tips at east and west ends, and these are clearly visible in the Pioneer closeup pictures. Most researchers now believe the spot "freewheels" between the counterflowing motions of the zone halves north and south of it. They point out that without an energy dissipation mechanism, the spot could theoretically last forever. The small amount of energy dissipated by the spot's vertical motion is not enough to appreciably affect the feature and it could last for centuries.



But what remains as the giant planet's greatest attraction, apart from its totally unearlike nature, is the possibility of some form of life in its atmosphere. At a symposium last year at NASA's Ames Research Center, the life question was one of the prominent topics of discussion during a review of the Pioneer results. The atmospheric lifezone would have to be between the temperatures for freezing and boiling of water, at least according to our Earth-chauvinist attitudes toward life. (And such chauvinism is valid if for no other reason than our ignorance of how to search for "life as we don't know it" as the Viking biology experiments amply illustrate.) Such a region does exist on Jupiter at pressures from 5 times Earth's atmospheric pressure to 10 times Earth's pressure. Pioneer findings suggest slow atmosphere-turnover times of months or years in Jupiter's equatorial and temperate zones, and these conditions could allow atmosphere-borne life to survive, according to University of Maryland space biologist Cyril Ponnamperuma. Such life, he reported at the symposium, would survive by the known ability of microorganisms to reproduce in enormous numbers in just hours or days, with part of the population constantly shunted to liveable regions.

But the principle question is, could life have begun in the first place on Jupiter during the giant planet's 4½ billion year history? Jupiter has 1000 times as large a region as the Earth for the formation of complex organic molecules. Numerous experiments on Earth have shown that energy applied to a simulated Jupiter atmosphere of ammonia, methane, and water produces the building blocks of life. However, because of the abundant hydrogen on Jupiter, these complex molecules may be too dispersed for chemical evolutions of life by combination. The appearance of life on Jupiter would require mechanisms for concentrating probably thinly dispersed organic molecules and for providing long time periods during which they would be protected from destruction. They also would require a liquid water medium in which to interact and combine.

Whether such a stagnant, water-droplet atmospheric region at Earthlike temperatures exists in Jupiter's vigorously circulating atmosphere is unknown. Possibly the Jovian polar regions provide the appropriate environment. Most doubts about life on Jupiter have been based on the idea that thousands or millions of years are needed to develop highly complex

life-building-block molecules and to combine them into a far more complex molecule that could reproduce itself. So, even if they were formed, complex organic molecules would be destroyed by being churned by atmospheric circulation into high temperature areas on Jupiter before life could appear.

But at the conference Ponnamperuma remained optimistic: "The origin of life on a planet may well depend less on huge time periods than on the number of times nature mixes up the proper ingredients in the right micro-environment. Enough billions or trillions of attempts could have already taken place on Jupiter—enough to produce a very complex molecule able to replicate itself."

The basic problem seems to be that molecules which could potentially combine to form life compounds don't have a piece of rock to hang onto or a stable water ocean to float in. It all has to happen in an atmosphere that, because of its circulation cycle of months or years, may tend to eliminate suitable environments. It is this circulation cycle that Voyager 1 and 2, the next robot investigators to Jupiter, will document. The two probes are not intended to settle the life question but their success will greatly add to our understanding of the giant planet. Just what the Voyagers will do, is give us our first detailed look at Jupiter and Saturn and, if all goes well, our first glance ever at Uranus.

Voyager 1 and 2, both identical spacecraft 750 kilograms in mass, are closely related to previous Mariner spacecraft though at first glance they resemble the Pioneer-Jupiter spacecraft (the huge antenna and lack of solar panels). When spacecraft are so distant from the Earth and sun, solar panels cannot be used. At the distance of Saturn, 100 square meters of solar panels would be required for every one which was adequate in Earth orbit. The outer-planet Voyagers carry three radio-isotope thermoelectric generators fueled by plutonium 238 carried far from the spacecraft body to minimize radiation interference. Together they will produce 425 watts at the beginning of the mission, 400 watts at Jupiter, and 385 watts at Saturn. The Pioneers were powered by 166 watt sources of the same type and, after five years in space their energy supplies are surviving above predictions. Spacecraft telecommunications have advanced enormously during the past few years. A decade ago Mariner 4 experimenters had to be satisfied with a transmission rate of 8.3 "bits" per second from Venus and Mars. (One "bit" is equivalent to one

of the hundreds of thousands of dots that make up a typical Mariner image.) The Voyagers are expected to send back pictures, spectra, and other measurements from Jupiter at about 14,000 times that rate and from Saturn about 4,000 times the Mariner 4 data rate.

Over the past decade almost every step in the communications link between spacecraft and Earth has been reengineered and improved. Reduction in noise temperature in the deep space network receivers, installation of larger antennas, redesign of the antenna feeds, low-noise receivers, all lead to improved sensitivity. In the spacecraft an increase in transmitter power, a new telemetry coding system, and use of a larger antenna have provided similar gains. The introduction of X-band communications at 8422 megahertz, two octaves above S-band, the frequency previously used, means a narrower beam and greater efficiency.

Eleven separate scientific investigations packaged in a well-insulated 90-kilogram experiment payload give unprecedented flexibility to the mission. The scanning platform on which the instruments that need to be pointed are mounted will have a wider range of viewing angles than previous designs. While the spacecraft are out of range of Earth behind the giant planets, they will make use of extended storage capacities of tape recorders adapted from the Viking orbiter, having a capacity equivalent to about 100 TV pictures. Six to ten trajectory correction maneuvers will be conducted for each spacecraft.

The TV cameras aboard Voyager 1 and 2 will achieve more than 70 times earth-based resolution for Jupiter and more than 600 times earth-based resolution for Saturn. For some of the satellites, objects of less than one kilometer will be resolved—equivalent to earth-based telescope resolution on the moon. The scientific payload includes a high-resolution, infrared interferometer and radiometer of the type flown on Mariner 9, and an ultraviolet spectrometer. Together these two instruments will be able to extract detailed composition of both the lower and upper atmosphere of Jupiter, Saturn, and Titan and describe the temperature distribution at various regions on these planets. Combining these with the TV images of the same regions will yield fascinating data for atmospheric scientists.

The two spacecraft will be launched within weeks of each other in late August and early September 1977, with arrival at Jupiter nearly two years later. Selection of precise arrival times at

Jupiter was a monumental task with literally thousands of possible trajectories. During the early stages of the planning for this mission, a 1979 launch of a Mariner class spacecraft to Uranus via Jupiter was under study. However, last year NASA decided to drop further planning of the mission in favor of other projects (particularly a Jupiter orbiter now planned for a late 1981 launch).

With the mission to Uranus gone and no spacecraft planned to reconnoiter that world in the foreseeable future, some test trajectories were run through the JPL computers to see if one of the Voyagers could pass Saturn in a way that would permit an encounter with Uranus. Not one but several trajectories will work. It will be Voyager 1, the second spacecraft to arrive at Saturn, that will be foraging on to Uranus if Voyager 2 does its stuff and no real surprises pop up. Thus the flight plan for Voyager 1 became much more severely constrained and the choice soon narrowed down to a few dozen possibilities for both spacecraft.

Astronomers are naturally anxious to have a look at as many solar system objects as possible with the Voyager robots, but certain mission priorities had to be established. Of all the bodies to be studied Saturn gets precedence because of its unique ring structure and the fact that it has not been previously explored (although, by the time the Voyagers get there Pioneer 11 will have given us a preview). After Saturn and Jupiter the largest moon in the solar system, Saturn's Titan—the only satellite known to have an extensive atmospheric cloak—is next on the priority scale. Following Titan are Jupiter's Io and Ganymede. If all goes according to current plans, by 1982 we will have extremely high-resolution photos, infrared and ultraviolet spectra of all of these objects, and less detailed information for about eight other satellites.

## Jupiter Encounter

Although launched second, Voyager 2 will be first to reach Jupiter. In mid-December 1978, while still 75 million kilometers and two and a half months from the giant planet, Voyager imagery will commence. These long-distance portraits will be equivalent to the best earth-based photos of the giant planet. Up to thirty photos per day will pour into the Jet Propulsion Lab during these early phases of the encounter. By mid-February 1979, the spacecraft will be within ten million kilometers of Jupiter

and taking photos showing more details than the best pictures returned from the Pioneer mission. Intricate weather patterns will be followed for dozens of rotations of the planet as Voyager plunges toward its target. Delicate wisps and feathos swirling past the Great Red Spot and surging among the equatorial bands will be seen in unprecedented detail and profusion—enough to develop years of work for earthbound Jovian meteorology analysts.

Throughout the far-encounter phase of the mission the cameras will periodically be trained on the various Jovian moons for navigational references and to refine the approach trajectory. Starting about 8 million kilometers from Jupiter, photographs of Galilean moons will begin to show previously unseen detail. The Pioneer pictures of these moons were only moderately better than the best earth-based views, so mapping of the Jovian satellites is totally new territory for the Voyagers.

The forty-eight hours that Voyager 2 will be within the orbit of Callisto, the outer Galilean moon, is the bonanza phase of Jupiter encounter. Although the mission profile could well change, present plans give this scenario: At 2 a.m. EST March 4, 1979, 29 hours from its closest approach to Jupiter, Voyager passes the orbit of Callisto. The Galilean satellites are all on the other side of the planet, so imaging concentrates on the cloud-swept Jovian disk. Fourteen hours out, Ganymede's orbit is traversed; and four hours later Europa's. Eight hours from closest encounter, Voyager finds Jupiter's innermost moon, the 225-kilometer wide Amalthea at its maximum distance west of its parent planet—the same side the spacecraft will sweep by. Now 415,000 kilometers from Amalthea and 450,000 kilometers from Jupiter, a preprogrammed sequence signals Voyager to pause in its photo mosaics of the big planet's clouds to scan the almost fully illuminated baby moon to a resolution of nine kilometers—enough to easily show the largest craters.

As the craft sweeps closer Amalthea swings out of range behind Jupiter. The planet itself, now four hours away, is a 70 percent illuminated disk. Two hours later the visible 55 percent of Jupiter is only 350,000 kilometers (barely two Jovian diameters) distant. An awesome quilt of streaming white ammonia crystals, alternated with brownish ammonia-hydrosulphide clouds, looms below. The enormous surface thins to a 40 percent crescent during the closest approach of 280,000

kilometers. Images to a resolution of 6 kilometers are possible over much of the vast ocean of clouds below Voyager 2.

Starting about one hour after periastron, when Jupiter slims to about a 20 percent crescent, the cameras turn to Io now only 200,000 kilometers away. The planned trajectory takes Voyager almost directly under the south pole of Io, within 22,000 kilometers of its surface. From this range the narrow-angle camera is imaging patches about 100 kilometers on a side, some of which yield 100 meter resolution. A mosaic of the sunlit side of the moon, taken as the spacecraft sweeps below the pole, requires about 250 narrow-angle frames. Virtually the entire sunlit hemisphere of Io is mapped during the flyby.

Io is rated the second most interesting moon in the outer solar system. Only Saturn's Titan is favored with a closer look. At an average of 3.5 times the density of water Io is the only major satellite in the solar system known to be denser than our moon. The satellite must consist of moderately heavy rocks like our moon. Yet, instead of reflecting about 11 percent of the sunlight that falls on it as our moon does, Io reflects 60 percent of the incident sunlight. No known rocks are this reflective. Infrared observation made over the last three years revealed that the Ionian surface is mainly salt, undoubtedly the residual remaining after saltwater oceans evaporated during the early history of the solar system. The infrared measurements also show that the surface must be dusty and porous because it heats fast in sunlight and cools fast in Jupiter's shadow (in a fashion similar to Earth's moon).

A moderately close-up photo of Io obtained by Pioneer 11 shows smudgy white and orange-brown areas, but basically less variation than the surface of the other Galilean moons. The Pioneer picture does not confirm the dark polar caps that had been noted for some time by observers on Earth. (Strangely, the dark polar caps even show up in some of the best photos from Earth.) Given this information theorists have speculated that Io was differentiated (at least partly melted) by the heat of nearby Jupiter during that planet's formation. This would put heavy materials near the center of Io with the lighter materials near the surface. Additional heat from radioactivity of the rocks over the last four billion years would ensure that this process expurgated the water from within the moon, releasing it to space to result in the salt deposits over the

moon's surface.

Above the salt plains of Io a cloud of sodium vapor extending at least 20,000 kilometers has been found by spectroscopic measurements from Earth. The sodium appears to be "sputtered" off Io's surface by the bombardment of high-velocity protons and other atomic nuclei from Jupiter's intense radiation belts. Io's sodium atmosphere is about 210,000 times less dense than Earth's and is constantly replenished by the sputtering due to the continuous flux of high-energy particles from Jupiter's Van Allen belts (the sodium, of course, coming from the sodium chloride atoms in the salt plains).

The Jovian magnetic field-lines loop from pole to pole, just as they do on the Earth. Io is right in the middle of them, resulting in a zone above and below the satellite, along the lines of force known as the flux tube. In this region there's a decrease in charged-particle flux because the particles spiraling along the magnetic lines of force from one magnetic Jovian pole to the other are absorbed by Io as it progresses in its orbit. Voyager 2 will fly right through the tube providing particle physicists with a field day.

The charged-particle environment around Jupiter is lethal and Io is buried in it. Human exploration there without a few feet of lead shielding would mean instant death. The radiation bathes the other moons as well. Only Callisto, on the outer fringe of Jupiter's deadly cloak, seems to offer a possibility as an outpost for a future Jovian base. Exploration of Jupiter and its environs is destined to be a task for robots for the foreseeable future. Zeus has protected his realm.

Flinging away from Jupiter, Voyager 2 gets a long shot at a 30 percent crescent Europa (15 kilometer resolution) but makes up for it as it passes within 115,000 kilometers of Ganymede achieving two kilometer imagery of the largest moon in the Jupiter system—again though, it will only be a crescent view. Finally, twenty-eight hours after Jovian encounter, the craft swings over Callisto at about the same distance it passed Ganymede. The trajectory has obviously been heavily weighted to Io investigations.

Not so with Voyager 1 arriving in July 1979. All the satellite encounters occur before Jupiter flyby, with sensational results: five kilometer resolution over 60 percent of Callisto's sunlit face; 200 meter resolution for parts of Ganymede; and one kilometer imagery of virtually all of the sunlit face (opposite sides will be illuminated for each spacecraft); Europa gets 3-10 kilometer coverage; and Amalthea will be allowed a few frames at 10 kilometer resolution. Io will not be imaged by Voyager 1. The results: maps of all five inner Jovian moons, ranging from 30 to 90 percent coverage, including some incredible close-ups with over 10,000 times the detail visible in the best telescopes on Earth.

What will these planet-size moons look like? One thing seems certain: craters will be as abundant as any on the inner solar system bodies. If any one of the moons comes up with an uncratered surface there will be "back to the drawing board" sessions at observatories around the globe.

Currently popular theories for the formation of planetary bodies in the solar system during its creation some 4.6 billion years ago describe a period

during which the dust and gas of the primordial solar nebula condensed into dynamically stable bodies approximately the size of today's asteroids (kilometer to tens or hundreds of kilometers in diameter). Everywhere in the solar system, except in the asteroid belt, these bodies combined by their mutual gravity into larger masses, with eventually one mass in each section of the solar system winning out. In the outer solar system this took place at lower temperatures, allowing the protoplanets to retain immense atmospheric envelopes which in turn triggered collection of more and more of the surrounding nebular particles.

The formation of a planet in the outer solar system thus resembled in many ways a miniature version of the entire solar system's formation—a disk of matter around a massive central core. The disk condensed into mini-planets, giving rise to the regular satellite systems of Jupiter, Saturn, and Uranus. In the case of Jupiter's five inner moons there can be no doubt that they were formed at the same time as Jupiter and from the same primordial blob. The table on page 45 tells us that the densities of the Galilean moons decrease with distance from Jupiter. This implies that Io is almost entirely rock, Europa mostly rock, Ganymede partly rock with a lot of ices mixed in, and Callisto almost entirely ice with possibly some mud mixed in. The scenario for the formation of Jupiter accounts for this, because the mass of the giant planet was sufficient in its early stage to produce prodigious heat simply from contraction to its present size. The effect would have been a miniature version of the primeval solar wind.

The Jovian wind whisked away most

THE MAJOR SATELLITES OF JUPITER AND SATURN\*

SATELLITES OF JUPITER	DIAMETER** (kilometers)	MASS (Moon=1)	DENSITY (Water=1)	RADIUS OF ORBIT (kilometers) x1000	PERIOD OF ORBIT (days)
Amalthea	225	?	?	180	0.489
Io	3640	1.24	3.52	422	1.769
Europa	3050	0.66	3.3	671	3.551
Ganymede	5270	2.03	1.95	1070	7.115
Callisto	4900	1.45	1.6	1885	16.689
SATELLITES OF SATURN					
Mimas	400	0.0005	1.1	187	0.942
Enceladus	500	0.0012	1.3	238	1.370
Tethys	950	0.009	1.2	295	1.888
Dione	1150	0.016	1.5	378	2.737
Rhea	1600	0.024	1.7	526	4.518
Titan	5800	1.91	1.4	1221	15.95
Iapetus	1500	?	?	3561	79.33

\*Jupiter has 13 known satellites, Saturn 10.

\*\*For comparison, the moon's diameter is 3476 km.



of the lighter elements that would have been part of the incipient Io. At increasing distances from Jupiter, the effect would be lessened in a ratio proportional to the square of the distance. Thus the cosmic blast of Jupiter's creation vastly altered what would have likely been the largest moon (Io), while Callisto emerged relatively unscathed. When we eventually get around to analysis of samples from each moon, we should get a clear picture of the intensity of the Jovian creation and the conditions in the Jupiter protoplanet nebula some 4½ billion years ago.

With each moon having distinct compositions they should react differently to the cosmic bombardment that is believed to have pummeled all the objects in the solar system during the first half billion years of the system's existence—the bombardment being mainly the result of the larger objects sweeping up the leftover material (those kilometer to hundred kilometer asteroidal-sized bodies we mentioned earlier). Just what the difference is when 100 kilometer objects plunge into a mainly ice body like Callisto will be one of the main breakthroughs that the Voyagers will achieve. We will, for the first time, see planetsized objects whose main constituent is not rock and metals.

## Saturn Encounter

Voyager 2's closest approach to Jupiter is to be less than half the distance that Voyager 1 will swing by the planet. This provides a major acceleration advantage for Voyager 2 when it "cracks-the-whip" around the big planet. The arrival date at Saturn, November 13, 1980, will be only fourteen months after Pioneer 11's visit to the ringed planet. There is a chance that the flight plan for both Voyagers will be altered by findings from Pioneer, but prior to that the sequence described is scheduled for Voyager 2.

It is unlikely that the significance of Titan will be diminished by Pioneer 11's findings (Pioneer should get 100 kilometer resolution shots of Titan on its

way out from Saturn). By any standard Titan has to be the most important moon in the solar system. At 5,800 kilometers in diameter Titan is larger than Mercury or Pluto, or any other satellite in the solar system. Its bulk is somewhat tempered by a very low density only 1.4 times that of water, so despite its size it is less massive than Ganymede. Even so, it contains 97 percent of the mass of the material in orbit around Saturn.

The Saturn system could be described as Titan plus debris. The overwhelming presence of this moon was made even more dramatic with the discovery in the last few years that it has an atmosphere which, in terms of density, is more like Earth's than that of any other body in the solar system. Density estimates range from 20 to 100 percent of Earth's atmospheric density. The composition of Titan's atmosphere, however, is far different. Its main constituent is methane with the likelihood of significant amounts of ammonia and hydrogen.

Earth-based observations also reveal that Titan is reddish in color and polarization measurements show that the origin must be red clouds that almost entirely envelop the moon. Carl Sagan and colleagues at Cornell University have simulated the Titanian atmosphere and believe that the red clouds consist of a range of organic compounds, both simple hydrocarbons and complex ones. Reds and browns occur in the Jupiter atmosphere and similar types of compounds perhaps operate in both places. The clouds and the relatively dense atmosphere produce a small greenhouse effect, raising the surface temperature on Titan from its normal -185 degrees C to -140 degrees C.

Theoretical calculations by John Lewis of MIT make it clear that the near-surface interior of Titan would be entirely ices due to its low-density and methane; ammonia and water vapor would be outgassed from the interior by the central heat of radioactive decay. (There are theoretically enough radioactive elements in Titan to produce

this kind of activity on a moderate scale.) There may even be surface volcanoes on Titan made of ice instead of rock, spewing out not liquid rock but "liquid ice." Sagan says despite the low temperatures, a Titanian biology can by no means be excluded.

Voyager 2's first objective will be to swing within 4,000 kilometers of the Titan clouds, the closest flyby of any object for either Voyager. Fifty meter resolution images of some of those clouds may be possible. The flexibility of the Voyager imaging system permits both high and low resolution photos to be taken simultaneously, allowing the detailed images to be precisely located within the wide coverage of the low resolution photos. Virtually the entire sunlit hemisphere of Titan will be imaged, with varying resolutions, for about four hours on the way in toward Saturn. Even lethargic cloud motion should be picked up. A temperature profile of the atmosphere should be possible as well as a density profile as Voyager's radio signals filter through the atmosphere as it streaks behind Titan.

The Titan encounter will occur eighteen hours before Voyager 2's closest approach to Saturn at 1:14 p.m. EST November 12, 1980. Voyager will loop under the southern hemisphere of Saturn passing about 40,000 kilometers from the edge of the rings. The swing behind both the rings and the planet will allow the spacecraft's transmissions to pass through the rings and the planet's atmosphere, giving us refined information on the particle size and the density of the rings, and the density profile of Saturn's atmosphere. The wide-angle camera images during this critical phase of the mission should be spectacular beyond expectations, with the half-illuminated planet casting an inky shadow on the rings and the nearest section of the rings seeming to bulge out toward the spacecraft. Even higher resolution on the Saturn clouds will be possible than with Jupiter. Jupiter's lethal radiation environment kept mission planners from pushing too close to the big planet.

## THE OUTER PLANETS

PLANET	DIAMETER (Earth=1)	MASS (Earth=1)	DENSITY (Earth=1)	ROTATION PERIOD (hours)	DIST. FROM SUN (Earth dist.=1)	ORBITAL PERIOD (years)
Jupiter	11.2	318.0	1.33	9.8	5.20	11.86
Saturn	9.5	95.2	0.69	10.2	9.54	29.46
Uranus	3.7	14.6	1.56	23	19.2	84.01
Neptune	4.0	17.3	1.54	22	30.1	164.8
Pluto	0.37	0.17	?	153.2	39.4	247.7



But Saturn seems to have less than 10 percent of Jupiter's radiation level and a close swingby will permit two kilometer resolution of the Saturn clouds. These clouds are less colorful and dynamic than Jupiter's, but this is to be expected on a world of smaller dimensions with presumably less internal heat and receiving less solar radiation to produce atmospheric climatic circulation.

Quick glances at several Saturn satellites on the way by will include better than one kilometer resolution on Rhea, the second largest of the Saturn moons. It, like all the satellites of Saturn, is likely a huge snowball. Portions of the moons Mimas, Enceladus, Dione, and Tethys will be examined with two to ten kilometer resolution during the flyby. The Rhea encounter is a close 59,000 kilometers.

With its wider swing around Jupiter and consequently smaller gravity assist from that planet, Voyager 1 will require almost a year longer to reach Saturn, permitting a thorough examination of the Voyager 2 Saturn encounter data. If Titan looks even more interesting than we believe it already is, Voyager 1 could be scheduled for a second close encounter with the moon. Current plans call for a swing through the system at moderate ranges from all the moons, with a sweep to as close as 15,000 kilometers from the rings. This still won't allow resolution of individual particles in the rings but will permit detailed examination of their structure. Resolution on Saturn's clouds will also be slightly better than the previous mission.

One of the most intriguing objects in the solar system is Saturn's ninth moon, Iapetus. One side of this bizarre world, the side facing the direction of travel in its orbit, is 5 times darker than the opposite side. After an exhaustive study of this satellite from 1971 to 1973, David Morrison and a team of astronomers at the Institute for Astronomy, University of Hawaii conclude: "Our study, like others of Iapetus that have preceded it, documents but does not explain the extraordinary difference in photometric properties between the leading and trailing hemispheres of this satellite. All satellites that have been studied photometrically show a leading-trailing asymmetry, but none approaches Iapetus in the magnitude of the effect." They determined that the bright side reflects 35 percent of the incident sunlight, while the dark side reflects only 7 percent. They find that a reddish color in the dark material on the darkside of Iapetus suggests a rocky composition for this face of the satellite. The relatively low albedo for the bright side argues against a pure ice surface on that side but does not preclude a mixture of ice and darker material.

Iapetus got compromised out of a close encounter, mainly because it is so far from Saturn that a close flyby would wreck the combination for inner moon examination. Iapetus resolution is likely to be 20 kilometers at best—perhaps not enough to resolve the riddle of this two-faced moon.

If both spacecraft leave Saturn, fulfilling their quota of 30,000 photographs and millions of related parcels of data, planetary scientists will be

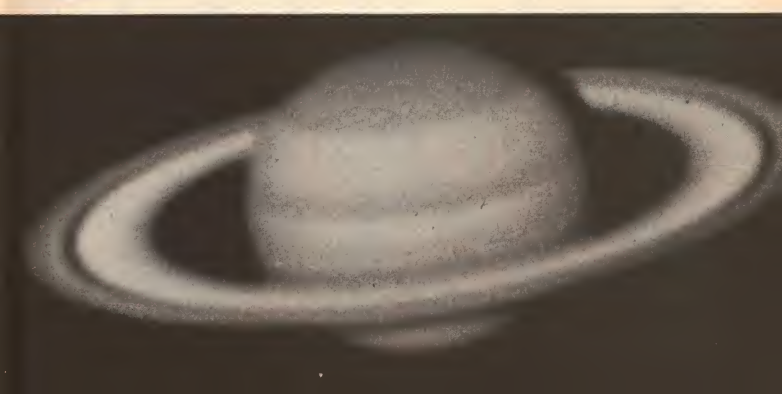
ecstatic. No further missions to Saturn are planned and none is likely to be launched before 1984.

If the scenario we have described flows to reality, Voyager 1 will be flung by Saturn's gravity on a five-and-a-half-year flight to Uranus, an odyssey of over two billion kilometers in addition to the two billion already traversed. If the spacecraft is functioning above expectations as it nears the seventh planet, there is a further option to target it, with Uranus' gravity, to a September 1989 intercept with Neptune. Since no surface features have ever been seen on either world there is an opportunity for a quantum leap in knowledge even if we only get a few photos. While still a year out from Uranus, Voyager 1 would be capable of sending back images superior to any we now have.

As the frontiers of planetary exploration are pushed past Pluto in the early 21st century, there will be nostalgic looks back at the golden era of discovery that today is reaching its zenith.

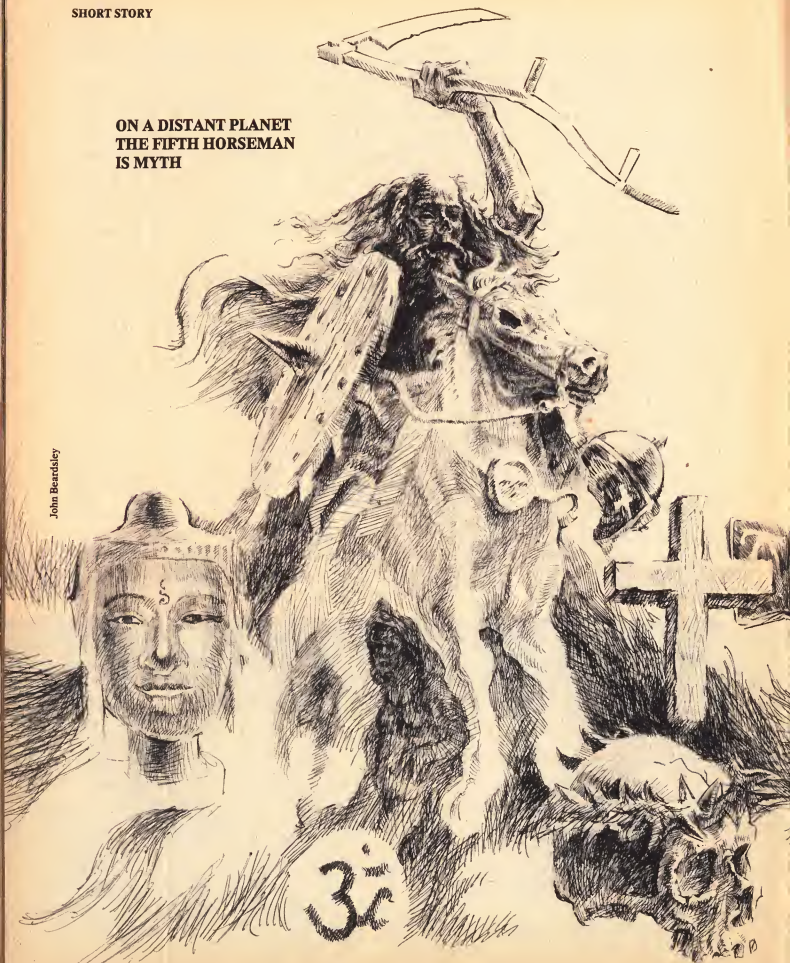
#### BIOGRAPHICAL NOTE:

Before becoming a full-time writer, Terence Dickinson was Science Editor at the Ontario Science Centre, Canada's largest public scientific institution. Prior to that he was editor of *Astronomy* magazine.



**ON A DISTANT PLANET  
THE FIFTH HORSEMAN  
IS MYTH**

John Beardsley



# HORSEMEN

BRIAN ALDISS

It was a quiet planet. The quiet had reigned for century piled on century. Until the Earth ship came.

Beings externally resembling humans lived on the quiet planet. Their hamlets, villages, towns, slowly covered the habitable parts of the globe. As they spread—slowly, slowly—they drove out the species of animal which had occupied the land. But the animals were not ferocious and, in many cases, lived in the hedgerows and copses close by humanoid habitation. They did not prey on the humanoids, or the humanoids on them.

The quiet planet's sun was old long

before the first amoebae stirred in its oceans. Although it occupied a fifth of the sky at noon, the sun's red warmth was thin. Evolution was a slow affair. The pain of life, its joys, were muted. Even the struggle for existence was curiously muted.

Over a half of the planet was land. The oceans were small and shallow. Much of the land was not habitable and the humanoids spread out only slowly from the equator. They encountered deserts where the sand never stirred. Storms were rare. Periods of calm prevailed for hundreds of years. Great illnesses lay over the land. Until the Earth ship came.

Muffled against heat, the people moved through barren regions before settling in clement valleys. Their villages were modest. They were great cultivators. It was their pleasure to tend the land, to groom it, to serve as its acolytes. The god they worshipped lay in the soil, not in the sky.

They bred domestic animals, obtaining from them eggs, milk, and cheese in great variety. Their rapport with the animal kingdom was so close that they hesitated to slaughter anything for fear of the pain it brought them.

The humanoids procreated rarely. Group marriages took place between four people and lasted throughout the years of life. The children remained many years in childhood, but often became independent when young; then they would strap a few necessities on their backs and move into the hills, to live among the wild things. With adolescence, some inner call would bring them back to the nearest town. In a short while, they would settle down at congenial work, marry, and enjoy a life of domesticity without regret. After death, they were buried in cemeteries under the open sky, with a carved stone to preserve their names. This was the way of existence on the quiet planet for many millennia. Until the Earth ship came.

The humanoids were in some respects a simple folk. When they slept, they did

not dream. When they suffered, they rarely wept. Their pleasures were muted. Yet, the sloth of their evolution, its iron peacefulness, had given them integration. They were whole.

Within that wholeness, they enjoyed much complexity. From the outside, their lives might have appeared dull. Their interior life was so rich that they required no foolish distractions.

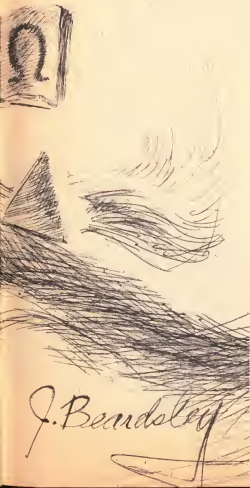
In a village called North Oasis, because it was in the high latitudes, on the fringes of a vast stoney desert, lived a marriage group of four which served as leaders of the community. Their name was Brattangaa. Many generations earlier, the Brattangaa had commenced to build a Common. Now the present generation of Brattangaa completed it.

The village lay in a valley, sheltered by hills. The Common stood on the edge of the village.

After the work of the day was done, the people of North Oasis came to the Common. They had no particular reason for meeting face to face, but they derived a mild pleasure from each other's physical company. They sat together on benches round peat fires, touching each other. They drank their sweet-sour parsnip wine. Nerdligs moved among them, slow and woolly. The evenings were unbroken in companionship. Until the Earth ship came.

The senior male Brattangaa stood at the window of the tower of the Common. Evening was fading into dusk, dusk into night, in the slow dying of the day. He looked out at the landscape, which at this hour appeared almost lighter than the sky. As was the case with his people, Brattangaa's interest was much less in the sky and the heavens than in the things of earth.

He could see the stone roof of his own marriage homestead from the tower. Inside him, he could sense the mind-bodies of his domestic stock, easily distinguishing the shapes of one from the next. He could sense the roots in the ground, growing towards a slow fruition.



## HORSEMEN

His attention moved to the cemetery. There, under the ground, he could still catch a faint scent of his parents, grandparents, and even great-grandparents. Their presences, ever fading, were like faint lights caught in a great fog.

It was all of fifty miles to the next little town, also clinging to a brook at the fringe of the stoney desert. It had no tower like this. Brattangaa could sense the lives of the people of that town; he knew them well, exchanged peaceable greetings with them, learned the news of the day. He could sense those whose mind-warmth was most akin to his own, his friends, as well as those whose mind-warmth was so different as to make them especial friends. Some welcomed him in—most did—others put him away with a friendly image, a wreath, a stained wooden door, an empty pewter plate, because they were too occupied with other things.

Brattangaa also sensed the people he knew by eyesight, the people of North Oasis, including his companions in the room below. He was not absent from them, or they from him. A jostling and enriching harmony prevailed. Until the Earth ship came.

As he sensed contentedly over the land, up the hillside, he saw with sudden terror a great flame standing in the sky. Such was his startlement that all in the room of the Common below also sensed it and turned their full attention towards what Brattangaa saw. In North Oasis, people did the same. More faintly, many people in the distant town did the same. Under the earth, even the dead generations protested.

All watched as the flame burned in the darkening sky. Ferocious light and flame beat upon the hillsides. And then the Earth ship came.

In the ship were five women and four men. They were of many colours and many nations. They talked in one language but they dreamed in nine.

Great excitement seized them on landing, as they set about their pre-exploration tasks.

"Kind of a drab-looking place, I'd say. Still, signs of habitation right enough."

"Can't wait to get out of this damned can. How many months we been cooped up in here?"

"Break out the carbines. Don't talk

so goddam much."

"Chance to get in some big game hunting, maybe. Just imagine a great big bloody steak, fresh off the bone!"

"Atmosphere great. We can land ten thousand colonists right here within a twelve-month."

"We're made, you realise that, made! Grab a few of the higher life forms, take them back to Earth. Imagine the sensation."

"Could be some nasty things out there."

"We can handle anything that goes. From now on in, we're in charge, baby."

"And remember we come in peace."

They went through an hour of rigorous, sterile drill, moving from chamber to chamber, bathed in changing wavelengths and liquids, designed to prevent them from contaminating the atmosphere of the planet they had discovered.

At last the great ground-level hatch slid open, grating slightly as it went. The nine stood there in their foil coveralls, weapons slung easily on their shoulders. Then they stepped out, walked on the hillside.

In their heads, in their minds, thoughts raced. A tremendous volume of various thought levels, some rising from depths beyond the conscious, beyond control, images hammered on the anvil of a ferocious evolutionary past. They looked down on North Oasis.

To Brattangaa in the tower, and to those who sensed him in the room below, in the little town, and in the distant town, nine strange fleshlike shapes formed on the hill. From that moment of contact, poison spread. Emanations, streamers, dark clouds poured out of their minds. The emanations assumed definite configuration.

All the myths of Earth—the whole husbandry of the imagination—burst upon the startled people of the quiet planet. From clashing cultures, warring climates, ancient enmities, the images came, as the nine spacetravellers moved forward, unknowing. With them came a terrible music, such music as had never been heard before upon the quiet planet, music that slashed at the eardrums like heavy claws.

Accompanying the music came wind. It blew upon their mind-senses like a storm. It whirled upon their mental landscapes, it hammered upon the doors of their consciousness. It blew down

chimneys and roofs. It was irresistible.

And on the pinions of the storm, on the surge of the music, above the brows of the clouds, rode the legends of Earth, all those terrible things in near-human form which haunt the human mind.

Pale Nazarene and sweating Buddha, elephants, cats, monkeys, serpents, gods, goddesses, grotesques with many heads, beasts, dragons, things of fire streamed forth from the hill. Demons, devils, angels, ghouls. Never had such things been loose before upon the brow of this placid world. They formed a plague to which there was no local immunity.

Immediately, their bad news spread across the face of the globe. Neighbor communed with neighbor, town with town, province with province, until every being on the quiet planet, humanoid or animal, stood and stared transfixed at the terrible monsters unleashed upon their defenceless minds.

Last to emerge from the psyches of the nine figures on the hill were four creatures more terrible than any other. Even the frenzied music, even the storm, died as they arrived, as they rose in the saddles of their steeds. Darkness fell upon the face of the planet. Beneath the soil, the lights of the dead flickered out.

Forth streamed the four horsemen. Eyes staring, foreheads ablaze, muscles straining, they goaded on their great steeds. With flaring manes, the four horses leaped eagerly forward, rejoicing to be free.

The planet was theirs. As the nine space-voyagers began slowly to descend the hillside, they saw nothing of what the humanoids saw—the flowing manes, the flashing hooves, the brandished weapons.

Pestilence, Famine, War—these were their names, with Death close behind riding an old grey nag. Death's long beard fluttered in the wind as he galloped into the valley. Over his shoulder he swung his long scythe. The broken minds fell before him.

Breathing ash, he stooped to gather up the bodies lying in his path, stooped laughing over the dying and the dead.

There was a plentiful harvest for him on the quiet planet, when the Earth ship came.





WHAT ABOUT THE NEWS THAT  
ISN'T FIT TO PRINT?

# Norman Spinrad BLACKOUT

In Orange County California, Freddie Dystum took an after-dinner Coors into the living room and sat down in his favorite chair as his wife Mildred turned on the ABC nightly network news. While he preferred the authoritative dignity of Walter Cronkite, Mildred was addicted to the sophisticated folksiness of Harry Reasoner and, in return for drawing a bye on the battle-axe bellowings of *Maude*, Reasoner it was. By such negotiated settlements was domestic tranquility maintained.

After the station break, Reasoner's calm smiling face came on the screen and began talking about the latest governmental crisis in Spain or Nigeria or someplace like that—with his belly stuffed with Colonel Sanders' finest, Freddie was drifting off into his customary pythonlike post-prandial stupor and one unstable foreign government seemed much like any other.

Then it happened, jolting him wide awake.

A hand suddenly appeared on camera from the left, shoving a piece of paper in Reasoner's face. It seemed to have some kind of military cuff on its sleeve, and when the indignant Reasoner turned to glare at the off-camera personage, his face went pale, and for the first time in Freddie's memory this man, who had reeled off every sort of world disaster for decades with professional calm and aplomb, seemed visibly shaken. The military hand silently shook the paper in front of Harry Reasoner's face, and the newscaster finally took it in a quivering hand and read it aloud.

"All television and radio newscasts and newspaper publications have been indefinitely suspended by government order until . . . until . . ." Reasoner's eyes bugged as if he couldn't believe what he was reading. He looked off-camera quizzically, swallowed hard, then continued: ". . . until the Department of Defense has gotten to the bottom of the flying saucer phenomenon."

The screen abruptly became a hissing field of multicolored static. Then an announcer's voice said: "In place of our regularly scheduled newscast, we bring you *Antelopes of the West*, already in progress." And a scared-looking faun was bounding across the prairie.

On 88th Street in Manhattan, New

## BLACKOUT

York, Archie and Bill sat on the edge of their bed pulling on their clothes, quite ready to believe that they were going to find Martians parading down Broadway in armored personnel carriers. Wasn't that the way superior invading forces always made their appearance on the 7:00 news?

"Can you believe this is happening?" Archie chortled. "Can you see the look on the President's face?"

"Lead me to your taker?"

"My god, do you really think there are tentacled monstrosities out there tearing the brass brassieres off Earth-women?"

"You're assuming that they're straight?"

Out on Broadway, people were milling about, not so much in a panic as in a state of bleary stupefaction, rubbing the glaze out of their eyes and staring at the transformation of the sky from sunset violet to fathomless black.

"It must be some kind of television stunt like that Orson Welles thing on radio," a tweedy man was saying to his wife.

"On all channels, Maxwell?"

Archie walked up to a cop leaning against his squad car and staring at the sky. "Have any flying saucers landed in New York yet?" he asked the rough-looking cop. Ten minutes ago, he would have gotten a snarl and a scowl or something worse, but now the cop simply said, "Search me," and studied the now-dark sky with undisguised dread.

Then something bright flashed across the southern horizon from west to east, like a slow-motion shooting star or a speeded-up satellite. The crowd oohed and then sent up an unsettling subterranean growl of fear.

Bill looked around nervously. "If we're going to be invaded, perhaps it would be wise to take to the hills," he said. "Far from our fellow man and juicy targets."

"Jesus, Bill, do you really think this is real?"

Something flared brightly, north above Harlem.

As soon as the alarm woke him up, Freddie Dystrum crawled out of bed, staggered into the kitchen, and tried to find some news on the radio. There was nothing but music on all the AM and FM stations, punctuated by the usual commercials and introductions, but not a word of anything else. There were no

news shows, no talk shows, and all the all-news stations were off the air.

Mildred was already in the kitchen making breakfast as if it were just another Tuesday. "What are you doing? What's happening?" Freddie rumbled as he gave up on the radio.

"Your breakfast is just about ready, Timmy is in the bathroom, and Kim is finally getting out of bed," Mildred said, turning over a pancake.

"Jeez, Mildred, what about last night? What about the radio?"

"What's wrong with the radio?" Mildred asked mildly.

"There's no news on it. All the news stations are off the air."

"You mean that flying saucer thing on Harry Reasoner last night?" Mildred said, finally looking up at him. "It wasn't a joke?"

"It doesn't seem to be," Freddie said. "There's no news on the radio, just like Harry Reasoner said."

Mildred now began to look worried. "Maybe you should call Charlie, doesn't he get the *Times* in the morning?"

"Yeah, he does," Freddie said, and he went into the den to call Charlie. Charlie hadn't gotten his morning paper. Charlie hadn't gotten to sleep till after 2:00 after hearing the announcement about flying saucers on Walter Cronkite, and about 1:30, he had seen repeated bright flashes of light zip across the horizon far away to the north. Charlie was scared.

Freddie told him it could have been missiles from Vandenberg, but he had to admit that that might not exactly be a soothing explanation.

Back in the kitchen, Timmy and Kim had heard about the blackout via the mysterious ectoplasmic kiddie grapevine, and had decided it was a good excuse not to go to school.

"You're not going to send us out there with flying saucers landing and Martian monsters running around, are you Dad?" Timmy said slyly. "With tentacles and big teeth and ray guns?"

Freddie wasn't having any of that. "Nobody said anything about Martians landing in flying saucers, Timmy," he said. "They said no news until they get to the bottom of the flying saucer thing, not that we were being invaded."

"Why would they do that if nothing's happening, Daddy?" Kim asked.

"I don't know," Freddie snapped. He eyed the kids significantly. "Maybe

your double-dome teachers will have it figured out when you get to school, and then you can tell me. That's what we pay our property tax for."

That ended that, and Freddie dropped the kids off at school on his way to the plant as usual. But after he dropped them off and drove back down the Santa Ana Freeway, he had second thoughts as he watched a long convoy of army vehicles monopolizing the high-speed northbound lane: grim, brown, and sinister-looking as they highballed towards Los Angeles.

"I tell you I don't like it, I don't like it at all," Karl Bendtsen said, staring glumly across his southern cornfield at the heavy midmorning traffic on the Interstate. "All those cars coming out of Omaha. Damn fools are likely to panic and swarm all over everything like locusts. Wish I had put barbed wire on the fences."

"Lot a good that'd do if we're being invaded by space people," Ben the foreman said, spitting a stream of tobacco juice in the general direction of Washington.

Karl snorted. "They got you believing that nonsense too?" he said. "Flying saucers! It'll turn out to be just the eastern press liberals trying to stir up some trouble. I read only last week in *TV Guide* that they're out to embarrass the government and they don't much care how."

"Was the government that made the announcement, Mr. Bendtsen."

"Arrr!" Karl threw up his hands. "Maybe they had some crazy flying saucer scare they were going to broadcast and for once someone in Washington had sense enough to shut them up before they stirred up a hornets' nest."

Ben nodded towards the highway. "Don't seem to have worked too well, do it?" he said.

A loud sustained roar caused both men to whirl and look to the west. A squadron of B-52s, maybe a dozen of the things, were lumbering ominously high across the sky like vultures, headed north toward the Arctic Circle.

"Maybe it's the Russians," Karl decided. "For sure, they're up to no good."

Willis Cohen's big editorial lunch with Harrison Gaur had turned into a disaster. Why did his big chance to pitch some article ideas to the editor of the

best-paying magazine in New York have to coincide with . . . with whatever this damned thing was? Gaur could think of nothing else, and people kept coming up to their table to swap paranoid.

"It *can't* be anything as simple as an invasion from outer space," Gaur was assuring a tweedy longhair. "It smacks of the CIA. It's got to be a cover for something."

"Must be heavy, if *this* is the cover-up, man!"

"Maybe it's a coup," Cohen said, trying for the tenth time to reassert his presence. This time, he finally succeeded.

"A coup?" Gaur said, fixing his full attention on Cohen. "You think there's a coup going on *right now*?"

I've got his attention, Cohen thought, grasping for conspiracy theories. If I lay it on thick, maybe he'll buy an article on it. "What if there really are spaceships visiting Earth and the government knows about it?" he said off the top of his head. "What if there are rival factions within the Administration? The hawks want to keep the whole thing secret until they can develop a weapon to knock down the saucers and then use it to drive a big increase in the Pentagon budget through Congress. The moderates want to inform the world and try to negotiate with the saucer people and thus strengthen détente. One side started to make its move and the other side is moving against them."

"The CIA versus the State Department—"

"Maybe the CIA versus the White House, even—"

"With the Army using the power struggle as an excuse to seize control—"

"Not necessarily—"

Suddenly there was a loud surge of voices at the bar around a man who had just sat down.

"—passing under the Verrazano Bridge—"

"—my wife called me at the office—"

Gaur turned and shouted at a silver-bearded man at the bar. "Ken? What's going on?"

"There's an aircraft carrier moving up the Hudson River!" the bearded man shouted, creating instant bedlam in the restaurant. Everyone was talking loudly at once and a dozen people abruptly got up to leave.

Including Harrison Gaur. "That does it!" he said, pushing his chair away

from the table. "Sorry about this, Will, but I've got to get going."

"Get going *where*?" Cohen said despairingly.

Gaur paused, looked at him, started to sit down again. "I don't really know where," he said in surprise. Then he was off again. "But I can't just sit here," he said. And Cohen, left out in the cold again, began to wonder if the whole thing weren't a plot against him. Peculiar that it all should have been timed to his meeting with Harrison Gaur.

Bill had insisted that they put as much distance as possible between themselves and nightfall in New York, so he and Archie drove northwest all day through lush upstate farmland and rolling wooded hills in the general direction of Montreal, staying off the main roads, which Archie figured would be jammed and dangerous if getting the jump on a general exodus turned out to have been a good idea.

As 6:30 approached 7:00, however, it seemed necessary to get a motel fast, so as to be in front of a television set when the network news did or didn't come on. They stopped at a cluster of wooden cabins in the ass-end of nowhere, where the owner charged them \$35 for a grim cubicle with a black and white set, take it or leave it, the next motel is twenty miles away, and I reckon I'm going to have all the business I can handle later on tonight.

They got the set on just at the station break, and they sat on the edge of the bed while commercials for dog food, deodorant, and huggable toilet paper reeled on in insane normalcy. "I'll bet we drove all the way up here and spent \$35 for nothing," Archie said. "Now good old Walter Cronkite will come on and tell us it's all some outré joke."

But good old Walter did not come on at all. Instead, there was an idiotic old pilot for a show that had never gotten on the air, about a lovable family of misunderstood Transylvanian peasants living in John Wayne's Texas.

"At least they could have run an old *Twilight Zone*, Bill said wanly.

"Or Gore Vidal getting it on with William Buckley," Archie said, turning off the tube. They sat there for a few minutes silently trying to absorb the reality of what was going on and failing to connect. Then, without saying anything to each other, they went outside into the empty parking lot.

Night had come on, and here in the

country, the sky was an immensity of stars glowing over the black outlines of the hills. Occasionally, a lone car moved down the road, ghostly bright and loud in the dark silence.

There was traffic up there among the stars. They could see it. A blinking red light moving across the western horizon. A star that moved in a deliberate parabolic curve across the top of the heavens. Things flying in formation far to the east.

"You know, Archie, out here you can believe it," Bill said. "You can just about believe it."

"But what would they want with us? Our cities are fetid sties, millions of us are starving, we're ungrateful, vicious creatures, and welfare is bankrupting us. Wouldn't any self-respecting space monster look for a tonier neighborhood to move into?"

"Maybe we're a rare French delicacy to them," Bill suggested. "Like a good moldy Roquefort. Haven't you ever been cruised by a fart-sniffer?"

Archie giggled nervously, but his flesh crawled.

Something loud was moving across the sky unseen, far away. Dogs began to howl. A helicopter buzzed across the sky, lit by its own strobe. Uneasiness seemed to creep across the heavens like roaches in a dark apartment.

Bill shuddered and nodded suggestively toward their cabin. "Maybe there's a Bette Davis movie on inside?" he suggested.

Freddie Dystrum awoke to glare and blare and a steering-wheel rim in the gut. A bunch of people had gotten together at Frank's house after a second evening without the news, and when everyone said they were going to keep their kids out of school and go to the mountains or Big Sur or Mexico if it wasn't over by morning, Freddie figured he'd be smart and beat the morning crush. All night, they had driven northeast toward the Sierras in thick moving traffic, not because they wanted to, but because it was already impossible to find an empty motel room. When they finally gave up about 1:00 am and tried to sleep four in the car, with the kids giggling over endless Martian jokes and Mildred jumping at every strange noise, Freddie decided he hadn't been so smart after all.

But now, waking up in the middle of a Hollywood Freeway traffic jam way

## BLACKOUT

up here in the wilderness, Freddie felt smart again.

For as far as the eye could see—and in this long straight valley that was saying something—the northbound lanes of the highway were crammed with barely moving cars. Horns shouted, radiators steamed, engines snarled and coughed and died, and a long plume of smog hung over the highway, baking in the heat. The shoulders of the road were full of parked cars—overheated, flat-tired, or full of people sleeping by the road like his own family. Helicopters buzzed around the mess like flies over horseshit. It looked as if it went all the way south to Los Angeles and all the way north to Nome.

"Good Lord," Mildred grunted, sliding up the back of the seat beside him. "It's like the Fourth of July at Disneyland!"

"Can we get breakfast now, daddy?" Kim piped up from the back seat. "I'm hungry."

"I gotta go to the bathroom," Timmy whined. "Real bad."

Freddie looked north up the road. He needed a john too. Not a motel, gas station, or Pancake House in sight, and it could take all day to go twenty miles in that screaming, coughing, crawling jungle of chrome, gas, and rubber. Looking south, he saw nothing either, but the southbound lanes were clear and empty and would probably be that way all the way back to Torrence.

"ARROARR!!" Freddie jumped out of his seat as a squadron of Phantom jets swooped low over the highway and roared northeast at treetop level.

"That does it!" Freddie snapped. "If it's the end of the world, it's the end of the world, and at least we can spend it near a toilet. We're going home."

"But Daddy—"

"No buts!" Freddie snarled, starting the engine. He made a ninety degree turn, stuck the front of the car into the first available hole in the crawling traffic, wedged his way past shaking fists across the northbound lanes, made a U onto the sweet clear southbound highway, and floored it.

Highballing south along the empty roadway, Freddie shouted at the idiots in the northbound traffic jam. "Lemmings, is what you are! Buncha goddamn lemmings!"

"What's a lemming, Daddy?"

It was a clear day in San Francisco,

and from Coit Tower, Ted and Veronica could see the packed traffic on the Golden Gate, loops of empty freeway snaking along the hills and valleys of San Francisco, the deserted Bay Bridge, and the ominous concentration of warships at the Oakland Navy Yard.

Ted had wanted to hitchhike up the coast towards redwood country until the coup was over, and then either go home to Berkeley or head for the Canadian border, depending on the gravity of what came down. But Veronica had pointed out that hitchhiking on the road would be the worst place to be when the long night of repression began. Hitchhikers would be the first people they'd scoop up into concentration camps. So they decided they might as well await the inevitable, hidden in the belly of the beast. They were on too many Berkeley pig lists not to feel totally paranoid there.

"In a way, maybe this is a positive thing," Veronica said. "The beast finally shows its true colors. Maybe people will wake up when they see tanks in the street."

Ted grunted dubiously. He hadn't seen any tanks—though there seemed to be a lot of helicopter activity and comings and goings at the Navy Yard—and the People had either taken to the hills running from Martians or stood around sullenly in confused, isolated little groups. The city had a dazed and empty look, as if an enormity had already occurred.

"You know," he said, "I think whoever planned it this way was a genius. The cities are emptied out, troops can maneuver at will and secure all the strong points, and when people finally drag themselves home, sweaty and beat, it's already all over and there's no energy to resist."

"Unless . . . unless . . ." Veronica looked north across the Bay where something strange shimmered like a mirage, bright and formless. ". . . unless it's for real."

Archie and Bill took a long walk in the woods in the morning after a slow breakfast, had greasy hamburgers for lunch, watched *Godzilla* on TV, looked at the jam of cars on the road, then had an early supper, killing agonizingly slow time waiting for the hour of the seven o'clock news. Stupifying bucolic boredom had made them decide that they

would head home unless . . . unless there was an announcement that the Army really was battling invaders from outer space in the streets of New York. This coitus interruptus was just too enervating.

At 6:50, they went inside and turned on the tube, watched the last ten minutes of a *Star Trek*, in which Captain Kirk had been forced to change bodies with a woman, then turned to Channel 4, hoping for the soothing moderation of positive old John Chancellor.

Commercials for beer, pantyhose, vaginal spray, and chicken chow mein, and then the NBC logo, and the familiar announcer's voice: "The NBC Nightly News, with John Chancellor!"

And there was John Chancellor, crisp, unruffled, and utterly normal, going into his rundown of the major news stories. An imminent coup was feared in Lebanon. The cost of living was up half a percent. A jet had crashed en route from New York to Shannon. The Secretary of State was flying to Rio. The Israelis had killed three Palestinian terrorists.

On and on and on. Someone had hit five home runs in a doubleheader. Drought threatened the midwestern corn crop. NASA had launched a weather satellite. Workers were striking in Cleveland.

Bill and Archie watched the nightly pabulum unrel in numb amazement, speaking only during the commercials, their nerves rubbed raw by the screaming ordinariness.

"What's happening? What's happening?"

"Looks like nothing's happening. Looks like the last two days didn't happen after all."

The last commercial ended, and John Chancellor looked earnestly and forthrightly straight at them, as was his wrap-up habit.

"Finally tonight," he said breezily, "the Defense Department's thorough investigation of the flying saucer phenomenon. After thorough satellite reconnaissance, a complete review of all available evidence, and exhaustive analysis, the Pentagon has announced that there are no such things as flying saucers. Absolutely and definitively. Good night for NBC News."

Freddie Dysturm sat woodenly in front of his television set, feeling the cool wetness of the beer can in his hand,



picturing the people dragging their silly asses back to the city, and wondering what the boys would have to say to each other at work tomorrow.

Beside him, Mildred sat shaking her head as she munched on a cold chicken leg. "What happened to the Martians?" Kim piped up.

"There weren't any Martians, stupid," Timmy told her. "It was just a dumb joke."

"A dumb joke all right," Freddie muttered, imagining the dull morning-after throb at work tomorrow. Yet he wondered as he sat there watching *Hollywood Squares* why he had this dread feeling in his gut that everything had changed, and not at all for the better.







Rick Bryant

Phyllis Gotlieb

A STORY OF INHUMAN TRAGEDY  
AND HUMAN TRIUMPH

# SUNDAY'S CHILD





The cloud lowered till it rested on the tips of the scraggy pines; lightning forked through it and thunder ricocheted between cloud and ground.

Nadja's eyes sharpened out of their stupor; she lay unmoving in the bunk and stared upward through the dome roof: a few autumn branches tapped it, beckoning. The Plexiglas triangles stared back at her. Their shutters had been folded back because of the darkening sky, and the sharp locking triangles became one faceted eye. One became many and many became one and again many. Eyes.

They watched. Eyes. I's. Eye. Watch. She screamed. "Stop!" And again, "Stop! No, no!"

She leaped and ran screaming through the partition doorway, down the hall, out the door, Mandros gaping, David frozen with a hand reached to grab her. Barefoot in the cold wind, the wet earth; her tattered nightgown billowed and her feet splattered mud at every step. "No! Don't!"

Lightning probed before her eyes, split a dead tree that burst into flames. Weeping, Nadja flung herself in its crèche, fainted, and lay like an animal roasting in coals.

David and Mandros pulled her out and dropped her on the ground; her hair

was burning, and David tore off his jacket, squeezed out the flames with it. She lay snorting with her face half in mud, the rags of her black hair tangled in white ash.

"God damn it, never know what she'll do." David shoved his arm into the muck under her shoulders and lifted her.

Mandros took her by the stick legs and said nothing. The downpour began again, drenching the fire, and combed the thin dark hair straight down Mandros's skull, caught in globules through David's hair and beard. They hauled her inside, a dead weight, bruised and filthy.

Stella was waiting. "She badly hurt?" "A few bruises, her hair got burned," David said. "I think she fainted."

He took the weight from Mandros and carried her to the small infirmary in the service complex. The skinny body hung over his shoulder; tears and raindrops fell from Nadja's face, with a flake of ash, a drop of blood from the bruised cheek, saliva from her open mouth. One wet red leaf was plastered on the side of her neck. He put her on the bed, took off his glasses and wiped them with thumb and fingers. "She shouldn't be here."

"Yeah." Stella ripped off the old nightgown in one powerful sweep. "Wash that and save it for patches."

"That is patches." He touched Nadja's

face, gently turned her body over and back again. "Just needs a bit of antiseptic."

They bathed the gaunt pale shape, trimmed the singed hair, daubed the bruises. Nadja stirred and muttered, protested with feeble hands.

When she was settled they stood looking at her for a moment without pride in their pathetic handiwork. There might have been beauty in her with health and vigor. And sanity, Stella said to herself. That's not asking much. "You're right. She shouldn't be here."

David said morosely, "Try moving her and she'll fight like a cat in a sack." He left, and Nadja lay as she had done most of the days and nights, shifting sometimes to short intervals of lucidity or bursts of mania.

She had battered the door one midnight a couple of years earlier, howling a tale of beating, rape, pursuit. No one had pursued. David and Joseph Running Deer had picked up her trail through mud and scrub for a kilometer, and except for a fox and two rabbits no other tracks had crossed her path. She was haunted down the crazy labyrinth of her mind by imaginary furies; because of her terror they had let her stay, and she had never left.

"What is it?"

Nadja was trying to whisper. She licked her lips and swallowed.

"What?"

"Send... send..."

"What?" Stella lifted the blue-veined wrist, its pulse thready and vulnerable.

"Send Mandros. Here." Nadja's head whipped from side to side. "Mandros!"

"Him? Why do you want—"

"Mandros!" Her voice rose to a shriek.

"All right! Stay quiet and I'll get him."

She opened the door, and stepped back. Mandros was standing there, waiting, hair still falling in lines down his forehead, lower lip hanging loose from his teeth. His brown eyes narrowed, shifted from side to side like Nadja's head. Stella licked her lips. "She wants you."

"Alone," Nadja croaked.

Stella looked at her, and then at Mandros in the checked flannel shirt still so wet it clung to his shoulders. "Try to keep her calm." Mandros said nothing. She passed him, the door closed. She pulled herself away from it uneasily and through the triangles watched David outside in the rain rescuing what was left of his jacket.



In the common room Ephraim Markoosie was sorting out his tackle box. His hair too was black, but his slant brown eyes were merry. "She gone wild again?"

"Yeah. Burnt half her hair off this time."

He shook his head. His wife Annabel was warming her feet by the tiny gas heater, knitting a scarf from yarn scraps; she had tied the ends of her braids with blue and red strands. Because they lived less outdoors, the Markoosies did not have the deeply weathered faces of most Inuit.

Stella sat on the braided rug, picked pieces of yarn from the tangle in the sugar sack, and began to splice them.

After a long silence, Ephraim asked, "You not feeling well?"

"I was wondering where Mandros came from."

"Better not ask," said Annabel. "You make yourself sick with too much of that."

Stella shrugged. She had no memory of anything before finding herself in front of the dome five years ago, and no strength of will or tortuous effort could push her memory further. She crossed her legs and kept on splicing.

David flung the sodden tattered jacket in the middle of the floor. "Have I got a job for somebody!"

Ephraim put aside the tackle box. "Ha. Mister Medicine Man, how come you sew up people all right and you can't fix clothes?" He picked up the jacket and began to pluck at the charred edges of the holes. "We got plenty of rabbit skins."

"I'm not a plastic surgeon."

Ephraim chuckled. Stella got up and took her coat off the hook.

"You going outside?" David asked.

"A few minutes. The rain's let up."

"There's a rough wind."

"I won't be long."

*To the church again?* he asked with his eyes. She lowered her own.

Joseph Running Deer was setting out on his patrol of the power line, and nodded as she passed. Pushing aside thorny bushes and whipping branches, she went a score of meters along the path to the church, a path she had worn mainly by herself, and paused to look back.

The dome's triangles reflected the sullen sky. Joseph in his yellow slicker, pieced into the shapes of leaves through the black branches, receded and dwindled. Five kilometers southward, Leona Cress from the next dome would be

patrolling the line to the transformer; when they met they would make the small exchanges for which they did not waste radio time or helicopter fuel: greetings, gossip, letters, packages. Across the boreal forest stood dome after dome.

From the zenith of each a watchtower rose: its inhabitant read pollution monitors and pressed reports on button panels. Sometimes a mine, well, or processing plant fifty of a hundred kilometers away would shut down for a day if the air got too thick. Whatever the reading, the air stank excrementally of sulphur and caught the throat; on blue days the gray always bordered the horizon.

The machines did not grope, crush, or boil as frantically as they had once done. There were fewer people and fewer demands. Southward the cities on the lakes sat choked in their own detritus and their inhabitants lived in domes much larger than the ones manned by the northern watchtowers, but still in domes with filtered air; every year fewer children were born in them, and every year more young adults lifted off Earth for the bleaker domes of planets and moons. The equatorial zones rippled with sands and sparse grasses, most of their lung-plantations hacked away, the rest withering. The lakes shrank and thickened with algae and the watersheds leached the increasingly treeless soil and carried the salt of the earth and its pollutants into more and more bitter seas. The icecaps had diminished, and the forests pulled their borders back from the temperate zones and retreated toward the tundra, narrowing and thinning over the Precambrian shield; the trees gnarled.

No starships lifted.

Five years earlier the first tentative but desperate fever to break the boundary of the solar system had reported a ring of alien ships appearing without warning from the void. Then in turn the radio of each venturer blurred half an hour of garbled hysteria and went dead. Tracking satellites lost them. Three strange ships orbited the system half a million kilometers beyond Pluto. Signals beamed at them in millions of combinations were unanswered, and after seven or eight months Earth gave up. Three new ships lifted toward the Pole star and died.

Earth sat and considered herself, walled-in and choking. Astronomers considered the ships and asked themselves: Sirius or Procyon? The ships had appeared instantly in orbit. There were no directions to adduce. One day some-

one said, as if it were a datum: Procyon—why, when Sirius was nearer?—and the twelve had become the aliens of Procyon, hostile by nature but of what shape no one could guess, except in the wild imaginings of the newly-formed sects that prayed to them.

Stella climbed the path to the clearing where the church stood on a rock of pinkish granite, one of many that rose from the soil, some angular, deep red or gray, some like the heads or limbs of giants waking to split the thin skin of Earth like an amniotic membrane. The church had been built by some group long vanished; it was a weathered shell, outer paint worn off, shingles falling or askew, steeple frail with rust. There was nothing inside: some believer had stolen the crucifix and the pews and paneling had been removed for use in the dome. It had no demonization, no creed, and Stella did not know why she came there, because she did not pray, but she stood in its windy doorway and watched the land from the height of the rock, rather than from the dome's tower with its winking lights and smutty windows.

Sometimes, with her inner eye, she watched herself from the ships of Procyon: through telescope, past port or viewscreen, cutting silver circles of orbit: Pluto, Neptune, Uranus, Saturn, past looping comets and asteroid gravel to the third planet, the dying world; stratosphere, atmosphere, cloud, and Stella. Big woman with a weathered granitic face and body solid down to the feet flat on the bone-colored rock, the multibillion-year-old granite. She did not know her age; certainly she was no longer young. She had long fair hair of the sort that grows gray imperceptibly, a wisp gathered from each temple and drawn back into a thin braid tied with string. Ephraim had made her a long sky-blue buckskin coat lined and bordered with rabbit fur; she rubbed corneal on it to keep it clean, a small vanity.

"Here I am," she told the Procyons. Because of her amnesia she had often had the terrifying fantasy that the aliens had formed her and set her in the dome for some awful purpose; she spent black hours scouring her mind and driving her memory; she went at her tasks with almost as much mania as Nadja's to drive out irrational guilt. One midnight in bed she had forced herself to tell David of the fear: shaking and sweating, pushing the words out.

He had lit the lamp and stared at her

for a long while, and she crouched before him in her naked soul, jeering at herself because her hands were trembling. "No, I'll never believe that," he said at last, and turned out the light. The black hours separated themselves and diminished. She accepted them.

The hour was black now, evening rising under the shadow of the world. The dome was lit in a filigree of light through its shutters.

Branches crackled; David came up the path, stumbling a little and cursing under his breath. His hands and arms were the essence of grace, and the rest of him heavy and clumsy as a dancing bear. He stopped at the base of the rock and looked up at her. "You all right, love?"

"Yes, I'm all right."

He reached out his hand and she came down and took it. A fine soft rain began.

Nadja's appetite improved; she ate broth, bread, stew. The hollows of her body filled out a little. She did not sleep quite so much, and her mania became subdued, but she giggled often on a note just below hysteria, and spoke in rhyming snatches.

The winter closed down.

The men set traps and caught lean foxes and their prey, the scrawny rabbits. The flesh of the foxes was left to placate the wolves and wild dogs who had joined the packs; the bigger animals had been overhunted and were scarce. The women chopped firewood and burned charcoal for the water-filter. Snow turned dirty before it reached the ground and glittered only in the brightest sunlight.

David, coming back with a brace of rabbits hung over his shoulder, stopped to watch Stella chopping wood; his hands were too valuable to gather calluses from an ax handle. "It makes me sweat to look at you."

"I'm sweating," she said between hacks.

Nadja drifted through the half-open doorway, singing and twirling to some imaginary orchestra.

"Oh God, there she goes again." David started toward her, and paused.

She was standing, arms stretched high, face to the sun and full of ecstasy.

"At least she put on some weight," said Stella.

"Yes... she has... hasn't she?" David was staring at the slender ankles in the snow, the thin arms rising from the sleeves of the shapeless faded gown. He dropped the rabbits and approached her

with a stalker's caution. "Nadja dear, come inside with me. It's too cold for you..." He pulled down one of her arms slowly and gripped her hand. "Come on, sweetheart." She went with him, skipping barefoot in the snow, singing one of the odd little tunes of the young child or the mad.

Stella's sweat turned cold. She put the ax on the stacked wood and followed.

David persuaded Nadja to lie on her bunk, squatted beside her and put his hand on her belly. She giggled and tickled his neck. He raised his head to Stella and the flat outer planes of his glasses shone with sunlit triangles. "How long since she menstruated?"

"I don't know... she's so irregular—we keep her clean, but it's hard to keep track." Her voice rose. "You think she's pregnant?"

"Don't get excited! Look," he smoothed the cloth over Nadja's stomach. "Not much swelling, but it's where she put most of the weight. You can feel—"

"No—" she stepped backward. *Send Mandros.* "You're sure."

"Yes, I'm sure."

"You knew it outside. You saw something."

"Yes," said David. "I saw it move."

The fire had not yet been built, and the common room was cold and bleak. David stuffed his pipe on the fender and knocked it with tobacco. "Last ten years, only three babies in the domes I know of... two of them taken south..."

Stella rolled a cigarette she did not want because she felt nauseated. "How far gone is she?"

David struck fire from a lighter, touched it to the kindling, and lit pipe and cigarette. "Three months and a bit. Early for it to move, but not impossible."

"She didn't throw up or anything."

"It's not necessary."

"You think she was raped?"

"I doubt it. She'd have probably raised hell and been knocked around."

"How could it happen then? Who would do that?"

"I don't know. I haven't seen any of the men hanging around her."

"Mandros... when she ran out in the rain—'Send Mandros,' she said—oh God, I wish I hadn't... but he was waiting, I was afraid she'd go wild again... and—and David, I think he's impotent."

"Yes... I've thought that. He doesn't go near anyone, seems to be shrinking

inside. Gives everybody the same look, blank. I'd swear he has no sexual feelings at all—but he's the only man we know was alone with her."

"Maybe he had feelings, once."

"Or somebody else did, on some wild impulse, when nobody was looking..." He shuffled his feet. "It wasn't me."

"I know that... I can read your face too." She licked her lips. "Should we ask her?"

"What's the use? It could be God, the devil, the Procyons, the Sasquatch, the Wendigo..."

"If we tell the others they'll be upset and insulted, a woman so sick being victimized. The men will be tense, and the women will start wondering..."

"No, we'd better not tell. She's hardly showing, and she wears those loose nightgowns... we'll have a fuel allowance built up soon and we'll call for the chopper, send her off on some excuse. It'll take a lot of doing, but we can't care for her properly up here anyway."

"We'll have the man here. It'll still be a horrible puzzle."

"I don't think we'll solve it."

She dropped her cigarette into the fire. "The atmosphere here will be poisoned."

"It is poisoned, love."

Mandros went about his work: patrolled the line, butchered meat, took his turn at the cooking pots and in the tower. Said perhaps ten words a day, mainly yes, no, okay, uh-huh; his eyes were blank. He did not go near Nadja.

Nadja ate heartily; her weight-gain balanced out the slow thickening of her belly.

Once, on a clear day, she said, "I like the blue sky," and smiled.

Stella's heart clenched, and relaxed. Maybe it would be all right; in the south Nadja would become well, the baby would be loved. Her black hour paled a little.

The dome's life went on quietly as ever with its slow air of winding down. The radio brought no news of great disasters and did not mention the Procyons. In the evenings, tasks done, Billy and Clyde sometimes put away their checkers, Billy brought out his battered fiddle and he and Clyde played and sang old loggers' songs; the flames shook to the stamp of their feet. They were wiry men with red weathered faces and crosshatched necks, friends for thirty years and perfectly suited to each other, without heat or passion. The late March snow thickened on the windows.

"It's like this, Dave, eh?" Clyde scraped one sole on the side of the other boot and stared at the worn leather. Billy stood half behind him, nodding at every phrase. "We used to work in the woods, eh? an there ain't been no fuckin woods since we were young bucks, so we come out here, eh?" Billy nodded and Clyde paused and looked up as if he expected David to read his mind.

"What are you getting at, Clyde?"

Clyde tightened his fists, twisting the question between them. "Up here we been workin, doin whatever had to be done. I think we pulled our weight, eh?"

"You mean you want to go? Clyde? Billy?"

Billy nodded.

"Yeah. I didn want to say it just like that."

"After twelve years..."

"Then I guess it's about time, eh? We're gettin older... if there's a place that's clean enough we'll fish an trap, an if not they need manpower down south with all them leavin an dyin off."

"But—"

"You wouldn't feel bad if we left, Dave? We done our share an all."

"You're my friends! I can't help feeling bad. And—and I just—God damn it, I just don't understand!"

"Well..." Clyde struggled and Billy pursed his mouth and shook his head. "It's a queer thing, Dave, and I don't think I understand either. We been talking about it, ain't we, Billy? Something here doesn't feel right, we dunno what, but we want to leave." He added, simply and with finality, "That's all it is."

David gave in. "At least let me call for the helicopter. We'll have enough fuel soon."

"No thanks, Dave. We got snowshoes. If we can take a hatchet an a frypan an maybe a couple of lighters, we'll make it on our own."

Fiddle, stamping feet, bawdy song... those longtime friends.

But—Nadja... could they? No, not those old bachelors, bent and dry as the wood they stacked.

The early April snow fell thickly and melted fast. In two weeks, David would send for the helicopter. He set traplines with Joseph and Ephraim. They spoke of Clyde and Billy with mild regret.

Stella found it strange that no one seemed to notice how swollen Nadja was becoming. Perhaps they were occupied

with their own thoughts.

One evening Joseph calmly announced that he and Anne-Marie Corbière were leaving in two days for Manitoulin Island to stay on the reservation with his family. Jenny Bellisle, whose father lived in the Métis commune there, said she would go with them. Once again David offered the helicopter, and they refused.

"I didn't even bother asking them if they felt funny." David turned the pipe in his fingers; flecks of ash scattered on the floor.

Ephraim sat punching holes in a piece of leather. Annabel squatted on the floor, propped against his back, knitting. Except where it concerned Nadja, David did not guard his tongue with them; he was tired of strange feelings.

Stella was sewing moccasins from cut pieces prepared by Ephraim. "Annabel, what's that you're knitting?"

The scarf had been finished long ago; Annabel held up a small multicolored piece. "Second sleeve of jacket. For the baby. Nadja's."

"Annabel," Stella whispered, "who else knows?"

"Maybe everybody. Or nobody. They don't talk. Maybe they don't want to know." She turned the needle and started a new row. "She's getting pretty big... you think it's Mandros?"

"We don't know. We didn't want to talk about it because we'd upset everybody."

"They got upset from something, eh? Mandros, he don't look like he's leaving."

"I wish he would," said David. "Oh God, I wish we'd never kept her here!"

"Ephraim? Annabel? How about you?"

"I don't feel funny," said Ephraim. "Yet."

Stella plowed through the wet snow to the church and stood in its doorway under the dripping eaves and rotting shingles. Through the branches she saw David as a shadow in the tower, Ephraim beginning his long walk down the line, Joseph with Anne-Marie and Jenny shouldering their packs and moving away forever.

"David, Ephraim, Annabel, Nadja, Mandros and I. Procyons, why are you waiting?... and why did I say that?"

"David, let's all leave in the helicopter." She was curled about his body, breathing against his warm stout back.

"Zat?" He jerked awake in the middle of a snore.

"I said let's get out of here in the helicopter."

"Unh. Won't take all if dome's empty."

"Who cares about domes? We're just puppets pushing buttons. We can't be kept here."

"Maybe don wan all go..." Not having been quite awake, he slept.

Maybe. Ephraim and Annabel who had come here to ease their old age a little—settling in the barren south? They would rather go north and die.

If we leave now it will be like sending them north to die.

The thaw quickened and little rivulets stirred, waiting for blackflies. The snow turned to gray rains that streaked the glass.

On the day David planned to call for the helicopter the cloud lowered and lightning forked it. Stella shuddered; Nadja had run out into the fire on such a day. She kept close watch, but Nadja was quiet, kneeling on the rug in the common room building towers with Clyde's abandoned checkers, red upon black upon red. The child kicked visibly in her belly, her own movements were slow and deliberate.

"You won't get the copter today," said Stella.

"Yeah." David tugged fingers through his ginger beard. "They couldn't reach here before nightfall even if the storm let up."

Nadja grinned, swiped wildly at the tower and checkers flew everywhere. Her face shifted abruptly, mouth turned down at the corners, and her eyes filled with tears.

"All right, Nadja..." David squatted, gathered the checkers with his quick hands and rebuilt the tower.

Nadja clapped her hands and laughed, the child writhed in her belly and he turned his eyes away.

Ephraim came and sat down, unrolled a piece of leatherwork; he was ready to take his place on the line as soon as Mandros returned.

Silently Mandros appeared in the doorway watching Nadja; water ran down his face, dripped from his oilskin and pooled at his feet.

For a moment the room seemed to echo with the banter of lost friends; filled with their shadows.

David's eyes were fixed on Mandros. Words came without control. "You see her, Mandros? Do you? A madwoman?"

## SUNDAY'S CHILD

Why? Why her? Tell me, hey?" His voice was almost pleading. "Mandros?"

"I don't know what you are saying," said Mandros. He stood, boots puddling the floor, a glove held in each upturned hand like an offering. "What do you mean?" His eyes were blank, not shifting, his lower lip hung.

He turned and left.

Nadja, unmoved, went on playing with checkers.

David rubbed sweat off his forehead with the palms of his hands. "I shouldn't have done that."

Ephraim sighed and got up, rolled his piece of leather and put it on a table. His jacket was checkered in red and black like a big game-board. He zipped it, took his oilskin off its hook and shouldered it on. The sky was darkening, wind whipped rain against the glass.

"Ephraim, don't bother about the line," Stella said. "Nobody's going to be attacking it tonight."

Ephraim shrugged. "I promised Tom Arcand some skins and I'll have a talk with him down there. In here is cold as Ellesmere Island." He took mittens from his pocket. "Maybe I'll go there."

"I'm sorry, Ephraim," David whispered.

Ephraim grunted. The outer door thudded behind him.

David pounded his fist on his knee in an agony of embarrassment.

"What's the matter, David? There was nothing wrong in asking."

His shoulders twitched. "We've lost the others... I don't want Ephraim to..."

Nadja looked up, and her hand, in the act of placing the last checker, paused above the tower. Her eyes were calm. She was bent forward slightly, and the drape of the gown over her belly hid the child's movement. She had been well cared for; her hair was clean and fell in soft waves to her shoulders, her dark eyes were unshadowed, her skin smooth; the bone structure of her face showed clearly, but without gauntness.

She's pretty, Stella thought. At last, and so what? "How's the baby, Nadja?" she asked, to fill the silence. "Which do you want, a boy or a girl?"

Nadja looked, somewhere, not at her. "It is a male. Its name is Aesh." She placed the last checker. "In our language."

"In our language? What..." Stella and David stared at each other in a strange fear.

David raised his hand as Stella was

about to speak again. "That's enough," he said. "Forget it."

Annabel came down from the tower and headed for the kitchen, and Stella in turn climbed the iron spiral.

The tower stood much higher above ground than the church, but Stella had never found it peaceful. Lights flickered over the panel map, the radio whispered of the deaths of continents; the stars had been obscured by pollution, and at night nothing could be seen through the windows except sometimes a dirty moon. The panes reflected the watcher and the objects inside, and Stella, who never flinched before a mirror, did not like the grim face the glass returned to her.

The shades and frames on the roof got in the way of the light below, but Stella in imagination observed David smoking his pipe by the fire and trying to find reason in Nadja; Annabel moving about among the cooking pots; Mandros perhaps sitting on the edge of his bunk sewing up the split finger of a glove...

White light slammed the dome, the rock, the world.

From the sudden darkness came a hiss intense as a scream. Stella cried out in echo...

When her blinded eyes cleared she saw the small beam of the emergency lantern, grabbed it out of its clamp with one hand and with the other dragged down on the switches of the wind generator and its power line.

The lights trembled and then surged. "Stel-ell-ella!" David was yelling over the intercom.

"I'm all right!" She was gripping the lantern, thoughts ricocheting wildly; the flash-beam swung over the dead blank panel, her heart jumped in rhythm with *no-loss, no-loss, no-loss*, beating so fiercely it took her a moment to realize that the radio had also gone dead. Wireless. She said confusedly, "But how—"

"—ella!"

"I'm coming!" She ran down the stair. "David, the radio's dead! The line—"

He was in his coat, cramming his hat down over his ears. "Ephraim! If he was around when it blew—"

Nadja was hunched on the floor, weeping. Annabel, in silence, watched David yanking on his boots. Mandros was waiting, dressed for outdoors. Stella found that her hand was locked around the lantern. She held it out, Mandros took it and went into the darkness with David. The door thudded. Annabel

picked up the scroll of leather and gripped it with both hands. Rain swept against the glass.

Nadja flung herself into a rigid backward arch as if she were in tetany and began to scream.

The power line was laid along the ground, flowing between hewn rock faces and over old stream beds; it was cased in flexible plastic, a twenty-centimeter cable that shifted naturally with seasonal erosion and withstood flooding and rockfalls. It could not break and had not been broken. It had been sheared by a terrific force that left the ends ten meters apart, coiling like pythons, wiring fused into lumps of solder.

Ephraim was lying in the pounding rain beside the charred track of its furious burning. He was dead, one arm rag and bone, one side blackened to cinder. The bag of skins for Tom Arcand lay beside him.

David doubled up, vomiting, and wondered dimly why he was not surprised.

He straightened, spat, turned his face away from Ephraim, and Mandros. "Too far... to bring him in... until the rain..."

"I am sorry," said Mandros.

David shook his head.

Mandros said, "Tomorrow I will make a travois."

"Yes," said David. "You do that." Blindly he headed north against the rain.

As they came within sight of the dome they heard the muffled screaming under the driving wind. David ran ahead, sloshing, dragged the door open. "Stella! Annabel!"

"Infirmary, David!"

They were holding the screaming Nadja down on the bed, one to each pair of limbs as the body arched, the child writhed. Nadja's gown was flecked with blood.

"You give her anything?" David struggled with soaked clothes.

"Only the usual. I was afraid, I didn't know what—" Her voice was trembling. "I'm afraid the baby—"

"I'll hold her, you give her a double dose, intravenous."

Nadja did not turn quiet under increased medication; her voice sank two octaves into a steady moan. Her body flattened on the bed. Annabel let go of the small tight fists and raised her eyes to David.

They were very still; they were the



stillest things in the room.

"Ephraim is dead," he whispered. "I think lightning..." Lightning? Whatever tore that line apart like a piece of string.

Annabel looked down and brushed the hair from Nadja's wet forehead. Her hand moved in a series of little jerks. "You bring him in?"

"Couldn't... half a kilometer away... tomorrow—" He pulled in a deep breath, exhaled on half a sob and hurried to the lavatory to wash.

Nadja's moan shifted to a sound that was half giggle and half snarl of pain. "Ephraim's away," she croaked, "he's gone to stay, he won't be back another day..."

Annabel pulled back her hand as if it had been burnt, and stared at the twisted face. Then slowly reached out again to lift the wrenching body so that Stella could change the gown and bedding. Nadja was bleeding in a thin steady stream.

David's primitive hospital gave him a few drags, instruments, bandages; a clean shirt and surgical gloves.

"Only six months, David! Is—is she—"

"Aborting, maybe... can't be sure it's six, though..." He rested his hand on Nadja's belly. "Or whether it happened that day..." The dome shape tightened itself into a peak. "But it's way low down, contracting and..." one hand on the humped curve, he explored with the other, "my God, fighting like hell—dilated—head's right up at the top—" Blood spurled around his hand. The red stream ran off the bed and dripped on the tiled floor. "Got to bring it on, it's the only way to stop—"

The screaming rose.

"Another needle?"

"Not yet—we'll need the—" sweat ran down his face and caught in globules through his beard, "need the—the—" "Christ, David, the blood!"

"I know, God damn it! Need anesthetic and we've hardly got—" bearing down on the squirming hump with one hand, he forced with the other, "—never had such a tough... ah..." The waters broke and flowed, the red paled for a few moments, and deepened again. David's face was so dark red it seemed he would sweat blood. "Never had such a—get the instrument and anesthesia packages off the shelf above—" groping through blood, heaving desperately at the hidden shape in the flesh envelope to bring the head on aim with the world. "That's it—first the relaxant..."

And fighting like hell. Why does he? He?

All right, then, pull him out hind-end first, anything to make the womb tighten and close, stop the blood..." "That's better..." place the cone so she can breathe, and tape it—Jesus, we've got enough equipment to pull a hangnail!" He was panting. He knew what to do well enough, and had almost nothing to do it with. "See if you can get Mandros to raise Central Eastern Hospital."

"I told you, David, the radio's dead."

He said nothing, aimed his blade to enlarge an opening for the stubborn and furious child. His teeth were chattering. Annabel wiped his face. Nadja was quiet and pale.

"Her pulse is weak," Stella said.

"She has a murmur, I'm scared of that—oh, I can't go on this way, it has to be cesarean."

He raised the blade.

The belly humped and a red bubble swelled out of its peak and broke; from within a sharp thing had punctured it. "What's that?" The pointed thing caught the harsh light, began to tear a ragged line down the skin. A claw.

"Oh my God!" David howled, and sliced. Divided the shredded membranes, reached in and pulled away the dark squirming creature, held it up, it was received.

Deaf, dumb, blind. David. Knife on floor in darkening red.

Stitch on stitch, he sewed.

"David... she's dead, David..."

Tears joined sweat rivers falling in blood.

"I know," he said, and kept on sewing.

It was male. *His name is Aesh.*

"In our language," David muttered. In our language, what?

Aesh was covered with fine dark hairs, not thickly, but like the arm of a hairy man. Ears very small, high on the head, eyes sharp and black, slanting a little. His nails were sharp translucent claws with a fine blood vessel running through each almost to the tip. In his armpits were small webbing of hairy goose-pimpled skin extending from halfway down the inside of the upper arm across to the vicinity of the sixth rib. His penis was short and tubular, without glans, like a section of aorta, and his one testicle was the size and color of a chestnut, covered with the long dark hairs that reminded Stella, hysterically, of the hair plastering itself in straight lines down Mandros's head in the rain.

"A mutant," she whispered. "The pollution..."

"No," said David. "I think he is as he was meant to be."

Swaddled in a blanket, bedded in a crate, Aesh slept.

Stella had sent Annabel to bed with sleeping pills; washed David as if he were the baby and propelled him into the common room; found the bottle of whiskey inherited from some transient, pushed it into his hands with a glass. Wrapped Nadja's body in rubber sheeting and placed it in the storeroom. It was very light. Cleaned the infirmary with mop and bucket until the only blood that remained was left crusting on the tied-off stub of the child's umbilicus. Because she was going to sleep in here this night, with him. He mewled and snuffled a little, Aesh.

"The power line is cut," said David, tilting the glass. He was nowhere on the way to becoming drunk. "I wish I liked this stuff. The power line, the wireless... the others are gone or dead."

"Tomorrow we'll go down to the transformer."

"We'll try it... I wonder if we'll reach it."

"Why, David? Who will stop us?"

"Whoever, whatever cut the line. You'll realize when you see it."

"I'm not sure I understand what you're getting at." She was afraid she did.

"The power, the radio," he repeated. "The others, Clyde, Billy, and the rest, felt funny, and they left. Ephraim refused to feel funny—and he's gone. Nadja... isn't needed any more. Is she? Could she bring up? that? child?"

"David, I think you're getting—"

"I wish I could. Oh God. But there was nothing. Even if we could have taken her south. Not with that. But we were kept here. The ones who were kept here were the ones necessary to make sure that child got born alive. In good health. That six-month full-term child." He looked at her as he had looked when she told him of her terrible fear. "It didn't all come into my head this minute. There were wisps of it before. I wouldn't let it come together and now I can't stop it. The ones who were needed were you and me and Annabel."

"And Mandros."

"Him."

"But—what is he? He's not—not like that child."

"Maybe he is, under a mask. I don't know."

"A..." she pushed the word out, "Procyon?"—horrible fear that I was—

## SUNDAY'S CHILD

oh it's so goddam silly, so irrational—because I can't remember—that the Procyons had, had made me and put me here for—David, you don't think—“That he's the construct, what I was so afraid I was... but why?”

“Maybe I am drunk,” said David. He capped the bottle and heaved himself up. “We have things to do, in the morning.”

There were not many places in the rocky land where the earth lay deep enough for burial, but Mandros found one, and before the sun rose he had dragged Ephraim's body back on a travois. Annabel bandaged it and dressed it in the old fur-lined parka Ephraim's father had made for him; he and Nadja, having had nothing in common in life, shared a grave.

David watched. His cheeks sagged, his eyes were red behind the glasses. By the time the last shovel was tamped the sun was half up, and the baby began to wail in a treble piping like the squeak of a bat.

Mandros swung the spade up so that its handle rested on his shoulder. “He wants feeding, that one.”

“Babies don't get fed the first day,” said David.

“That one does,” said Mandros.

Without a word David went indoors to instruct Stella and Annabel in mixing boiled water with sugar and powdered milk.

“You don't know if it will take this,” Stella said.

“It's all we've got.” From the stores where everything was saved to be reused he had gathered small bottles and was putting them to boil in a pot of water. “Cut off the fingertips of some of my surgical gloves for nipples. They won't hold up well—” he bent over the shrilling, whimpering child, set in his crate-cradle by the stove for warmth, and ran his thumb over the red parted gums, “—but this one looks as if he'll be wanting solid food very soon.”

“David—if we're closed in, as you say, line cut, no radio—where will we get it?”

“I don't know that either.” He lifted a tiny wrist, noting that the fingers did not curl into a fist but clenched back on themselves so that the claws did not dig into the palm. “Those will bite, these will scratch, can't be cut because of the blood vessels... webbing here—vestigial wing?—don't think he'll fly with that... wonder what his insides are like.”

Annabel looked down at the baby and away; her tearless eyes were dull. “Spirit child,” she muttered. “Witch-child.”

The rising sun caught two shining spots on the small tight belly, and David bent closer. On each of the tiny crinkled nipples a white drop had risen. “He's got witch's milk,” said David. “But that's a human phenomenon. Whatever else he is, Aesh-in-our-language is half human.” He put on his jacket again and paused in the doorway. “Mind the claws when you feed him.”

The earth outside was like a soaked rug: water pressed out of it at each step. Too shallow to allow water to drain, it would pool into sickly marshes in summer.

David followed the line, squelching in rotten leaves and soggy twigs. The sky was gray-blue, the sun smoky; he detoured around the break. The baby's cry seemed to be within him, a ceaseless mourning for Ephraim, that joyful friend, and Nadja... because I kept letting it go when she should have been sent away... and oh God, Ephraim and Annabel, why didn't you... hurt so if they... much more.

He walked and it seemed so broken into a kaleidoscope of Procyons? Why Stella was so afraid to construct...

He trudged on, rose.

What is a construct? Why that term? What did I mean?

He glanced at his watch and stopped. He had been two hours, in the gullies, over swamps, and a transformer was on the hilltop. Or should he have no transformer.

He felt as if he were in a disturbance of dizziness with the trees and rock walls dipping into a hole. The familiar terrain and he closed his eyes and mark his progress the way he had come.

He opened his eyes and found it. The tortured snake-ends of the broken line rose with their spayed wires forty meters back. He had walked half a kilometer in two hours.

He bit hard on the gloved knuckle of his forefinger and refused to tell himself that he was crazy. He wheeled about and

pushed foot before foot, holding hard to the central crystal of his being while the thoughts around it fragmented into wild patterns and the ground seemed to run under his feet like a treadmill. After a couple of dozen steps he gave up and turned back.

As soon as he took the first step toward the dome his mind started to clear and arrange itself into the well-known lattice of his personality.

And, again, he was not surprised.

He stopped for a moment. The sun shone, the sky was hazy and gray on the horizon. The earth accepted the weight of his step, the rock was solid.

“We are in quarantine,” he said aloud. The squawk of a crow answered.

“You too,” he said. He giggled. “Rabbits, foxes, worms, you—and us.”

Shut up, you fool, and hold onto your head!

A bit dizzy still.

Think! reason! cogitate!

Leona Cress, Tom Arcand and the rest



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“I don't know—it was just there. Outside.”

“Ah. We are being provided for.” He stopped himself from giggling.

Aesh screamed for three solid weeks. The shrill whine echoed through the empty spaces of the dome and killed sleep. Stella and Annabel took turns

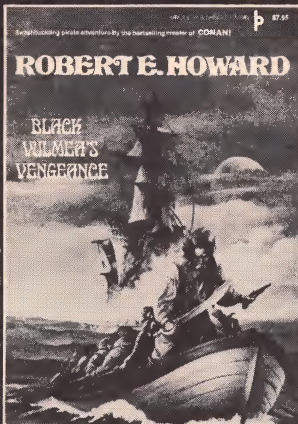
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BLACK VULMEA'S VENGEANCE  
by  
**ROBERT E. HOWARD**

I understand the book will be shipped immediately after publication October 1978

## SUNDAY'S CHILD

massaging his belly, David changed the formula a dozen times.

"What in God's name does he want?" Stella held the jerking, twisting child at arms' length; her face and neck were crisscrossed with scratches.

"To hazard a guess, meat," said David. He growled, "Maybe blood." Haggard, he stumped off to tell Mandros the goddam powers-that-be had better send lactic acid. He got it.

The thick curdy stuff silenced the child for an hour or two after feeding. "Why in hell should we have to ask? You'd think they'd know what to feed the brat."

"Maybe... maybe it's an experiment they haven't tried before," said Stella.

It was cold in early May. The knobby buds pushed out of the trees but did not open. Aesh discovered the power of his nails, shredded his blankets and clawed splinters of wood from his crate. David coated them with the plastic used for temporary tooth-fillings and while it was still wet bandaged them.

The mittened hands, unexpectedly, did not make Aesh scream. Surly-faced, he gnawed at them with his toothless gums.

"Keep him busy," David said, "till the teeth grow in."

Stella cupped him up and held him close, though he fought like a bobcat.

"What do you want to do that for? Think he'll be grateful?" The goblin face snarled.

"I don't know. I think somebody should." She patted his cheek and he tried to bite her. "Aren't there mothers for this kind of child, somewhere?"

David shuddered. "I hate to think."

Aesh would not tolerate clothes. Stella wound him in a blanket and carried him outside with her blue coat wrapped around him. Sunlight made him whimper and he turned his face against her neck.

"Better learn to like it, Aesh. It's your sun now."

She glimpsed a movement from the corner of her eye. Mandros, standing by the burial mound, had turned to face her. He was holding something unrecognizable in his hands, and she moved closer to see what it was.

A wood-carving, or a natural growth of roots and branches twisting in and among each other in knots; he parted his fingers and held it in cupped hands for a moment, a convoluted flower of wood. It was attached to a pointed stake, and he bent and pushed it into the earth at the

head of the grave. A marker. As he stood again he raised his face to the sky, hazed over and thick at the horizon; a few dewdrops sparkled on the branches.

Stella watched, though the child squirmed and water was seeping into her moccasins. The idiot face was expressionless.

"This, here, is a paradise," he said.

This here. This, here? A world of difference in a catch of breath.

"Paradise, he said."

"Paradise! What does that mean? They've got a world, dying even faster than ours... they think they'll people it, with more of Aesh. I guess it's the only place they've found compatible."

"But why would they pick Nadja, when there were Anne-Marie, Jenny, so many other healthier ones?"

"Perhaps something in her genetic make-up. They'd probably find enough like that. There may be more—of these babies—in the world."

"I don't think so..."

"Why?"

"I just don't."

"You surely have odd ideas, Stella."

"No odder than what's happening."

"One of a kind—who would he find to mate with?"

"It may not matter, just so they can be bred."

The child's demanding cry rose again. David tipped the last of the whiskey into the glass. "My short career as a drunkard. No radio. If there's a radio here it's probably embedded in Mandros somewhere, unless he's a telepath. If we tried to attack him or the kid they'd be down on us like—like that lightning."

"Have you thought of it, David?"

"What?"

"What you said about attacking. I don't think they mean to keep us alive if they succeed."

"Ha." He shrugged. "I'm a coward."

"You may be a bit of a liar. You're not a coward."

"No? Well... if I'd have known what it would be I'd have aborted... and if she'd miscarried, okay..." He turned his face into his shoulder in the odd gesture he always made when he was about to give something of himself away. "I'm on the earth to save lives and I'm willing to die doing it."

"That's probably why they chose us, then."

Always asking why. Why it happened. Why they chose. Why—you surely have

odd ideas, Stella—why I think there's only one, plus Mandros. I don't know. Why Procyons?

"One is enough of you, Aesh." She held the clawed hands down across the tight belly. Thin dark lips drew back from the gums. At one month the eyeteeth had come in, tiny pointed things like the claws.

"Fangs, for God's sake," said David. "I wonder what it's going to be when it grows up."

"I wonder how old it will be when it's grown." The bandages had been removed from the claws. "Aesh, you do not scratch people. You keep your hands to yourself and hold things with them." He kicked out with his feet. She grabbed them and knelt over him, hands grasped in one of hers and feet in the other. He shrilled. "I'm still stronger than you, Aesh."

"You mean," said David, "how long we have."

"Yes, and how much of the place they want, and what we can do." Aesh squirmed and shrilled in the double grasp.

"He needs a new crate. Or a cage."

She pulled her hands away quickly, and Aesh, finding his limbs free, waved them aimlessly and stared at them in silence. "Annabel..."

"Not so good. I know."

"She doesn't answer when I speak to her. This morning she put salt in her coffee and didn't notice when she drank it."

"Yeah. Another one."

Annabel had aged immensely. Her hair remained black, but her face thinned into harsh lines and her eyes were dull. She slept long and she did not knit or sew. Stella took over the cooking and cleaning. The Procyons were generous. Food and fuel appeared at the door as it was needed, and there was no more hunting or woodcutting to be done. Stella and David were left between the silences of Mandros and Annabel, amid the turbulence of Aesh, without hope to find whatever strength they could.

At six months Aesh crawled, and at eight he walked. His nails scraped the floor, and David made him clogs of wood covered with leather and deeply scored with grooves to accommodate the claws. "Stell-lal!" he shrilled. "Da-ved!"

He hardly spoke to Mandros at all, but it was Mandros who caught him as he fell, or pulled him down from shelf or mantel when he climbed. His clogs



racketed, his shrill cry echoed in the spaces.

As winter closed down David and Mandros cleared pieces of old furniture from the annex adjacent to the common room, moved the bunks there, and partitioned off some of the unused areas of the dome. Annabel whimpered when her bed was moved, and again when she saw Ephraim's tackle heaped on a pile of useless stuff in the storeroom. She walked ceaselessly among the echoes, her hair uncombed, her hands clasped before her. The stillness of hands once so busy wrenched at Stella, and when she sat the old woman down and combed and braided her hair, the submissiveness of the bent shoulders drove her to a fury at the universe. But she had no claws, and no one to scratch.

*What we can do...*

The snow fell heavily, the tree-branches cracked in the driving wind.

One blue morning, Annabel combed and braided her own hair, bound the braids in blue and red strands of wool; she put on parka, boots and mittens, and stood before the doorway of the dome, hands clasped.

Stella, Aesh clattering behind her and grabbing at her shirttail, found her there. She stopped. "Annabel," she whispered.

Annabel stared at the wind-drifted snow.

"Annabel—"

"I'm going into the north." There was no inflection in her voice.

"There is no place to go."

Annabel turned her head and looked at Stella. I know, her eyes said.

Stella dragged Aesh into the common room and sat down. The door slid open and thudded closed.

She covered her face with her hands. "Stell-la! Stell-la!" the child whined.

Some feeling made her raise her eyes to the light. Annabel, already half-whitened by driven snow, had stopped and was looking in at her. She smiled once, her face crinkled in the old way, and went on.

Go, Annabel, go and be free. The snow is full of peace. Go on, God forgive me, I love you, Annabel, go on...

"David, what can we do?"

"Nothing, sweetheart."

"There is peace—somewhere."

"Not for us yet."

"Hold me, I'm so cold... you're good

and warm, like a great old bearskin. So good."

"Ha. I always knew you wanted me for my body."

Two rows of small pointed teeth filled the spaces in Aesh's gums, and he ate meat, first cooked and then raw; sometimes a little cereal; drank water, sucking with his lips as if it were flower nectar. He slept deepest toward morning and napped for an hour at noon; if allowed, he would have been nocturnal, but shamelessly David drugged him every night. No retribution struck.

He spewed urine and feces unreservedly on carpet and floor. Stella and David battled him up and down the days and, bleeding from scratches, wrestled him to the toilet bowl. After months he gave in. In revenge he screamed his fury every time he used it. Mandros watched. Sometimes, it seemed, in wry amusement.

He grew, hardly changing the shape he was born in, bent stick limbs and tight round belly; snarling face with sharp teeth, small hairy ears, black malevolent eyes; he hated light and his ears were so sensitive he went into fits of trembling at the sound of raindrops or scraping branches on the glass. He was ugly. The long shining hairs on his red-brown skin thickened and he would not accept the touch of clothes. When he went outside he allowed David to tape slit-eyed snow goggles to his head.

It became apparent early that his function was to break: from outside, he threw stones at the glass; when it would not give he set about breaking all the branches he could reach. One time David pulled him inside and he tore the carpet with his teeth and nails.

Stella sat on him.

"Maan-dros!" he wailed.

"Shut up, you little bastard! He knows I'm not going to hurt you! You've done too much damage to the things made by people I cared for and you're going to stop if I have to sit on you twenty days and nights!"

Released, he jumped to the mantel and tried to wrench it from the wall. That was too much for him; he dropped to the floor and slept. Stella watched him. The fluttering of his birdlike heart raised the hairs on his chest a hundred and twenty times a minute. Little beast.

Mandros kept him from harming himself and was rewarded with arrogance and contempt. He allowed David to treat his scratches and bites, to release a foot

caught between stones, to pick out burrs so that they did not tear his skin, but he hated being touched. Toward Stella he was violently contradictory. Sometimes he cursed every word she addressed to him, for he had learned to speak well; had gathered David's and Stella's curses and even seemed to pick some out of the air. Other times he ran after her plucking at sleeve or hem, whimpering, "Stell-la!" as he had done when he was a baby.

"What do you want, Aesh?"

"I don't know."

She reached out a finger to touch his cheek, gently. He pulled back shrilling, and ran.

Stella thought of the ones who had left and the ones who had died, watched David's worn face, considered her own imprisonment, and cursed.

Years passed.

Stella stood in the church doorway. "Do you know how years pass?" she asked the Procyons. "Like weeks. All the years I can't remember are lost, I don't know how many, and God damn you, you've taken away the rest."

She pushed and pushed at the wall in her mind, tortuously following the pathway back, to salvage some area of hope and freedom, and always the track stopped short one gray morning before the dome.

David grew somewhat thinner and white streaks ran down his beard. Stella hardly glanced at herself in the mirror and could not tell whether she seemed older. Mandros did not change at all.

Near ten Aesh was the size of a boy of seven or eight; his limbs thickened and his belly drew in; he had powerful shoulders and walked straight-legged instead of scuttling like a lizard. But he would not sit still long enough to learn anything, and on dull days that were not too cold he moved ceaselessly in the confines of the force-field, climbing trees, squirming among bushes and rocks, rolling in the mud of stagnant pools undeterred by mosquitoes and blackflies.

In the August heat Mandros sat outside on a stone with his hands folded, staring at nothing. Aesh was rampaging nearby.

Stella squatted on a hummock in front of Mandros; she knew that he was the agent of her death, but she did not yet see death before her, and she was no longer repelled by his dark oily skin, scraggy hair, loose mouth that opened on stained yellow teeth.

"Mandros, you are from Procyon, I don't have to ask. What is your planet?"

"The fourth." He did not look at her.

"What are your people called?"

"Shar. In your language."

"But you were made to look like us—"

"That is true."

"And Aesh looks like other Shar."

"Not completely. He looks somewhat like his mother."

She said faintly, "I hadn't noticed."

"His legs are abnormally long and his face is narrow."

"Your men and women, do they have the differences we have?"

"Of course not. The women are only womb-casings, without head or limbs."

She swallowed to avoid retching.

"Then no child can love its mother, or be loved."

"Why should it? It is not necessary. We worship."

"Dear Lord," she murmured, "fruit of the womb, Mandros! You say this is paradise, but we are infertile and the world is dying."

"Not so fast as ours."

"For the same reasons?"

"I know what I am told: the wombs are scarce and sterile; the world is barren. Perhaps we are cursed."

He made a quarter-turn away from her, and she fell silent.

Aesh appeared before them, eyes slitted against the sun, the claws of his feet pressing into damp earth. "Why are you talking to this thing?"

Stella said, "I was speaking to Mandros because I wanted to learn about your people."

"This has nothing to teach you. Thing!" He flicked a claw near Mandros's eye. Mandros did not blink or flinch.

"Stop that!"

The claw paused in midair. He was looking at her strangely.

"Mandros is here to take care of you in this place and you will have to answer to your people if you hurt him."

Aesh's laughter could crush bones. "I don't have to answer to anyone because my father is the Emperor. Do you think this thing can be hurt?" He dug claws into Mandros's forehead and began to pull down.

"No!" Stella grabbed his arm. She was not stronger than Aesh any more, but she was a good match. She caught the other hand aiming for her eyes, hooked his feet from under him with her heel, they went down, rolling in the mud. Mandros sat unmoving on the rock.

They fought over rocks and brambles

and splashed in pools, scattering clouds of insects; Stella protected her eyes with an arm and he bit, she grasped one of his arms and held it with her teeth, his feet clawed her legs, his shrilling made the air tremble, his nails hooked in and pulled out in a hundred places, reached again and again for her eyes, her sleeves shredded protecting them, his teeth tore at her ear, he ripped out a handful of her hair, and finally butted her belly with his head, left her flat on the ground and breathless, stood over her laughing for a moment, then climbed the framework of the dome, leaned against the tower with his arms crossed and laughed.

Mandros moved, then. He stood up and called, "Aesh! Come down, you will hurt yourself!"

Stella sat up, gasping, pulled herself first to her knees, then to her feet, pushed the hair out of her eyes. She panted. "Sonofabitch! Him hurt!" She was bleeding from dozens of punctures and scratches. David, on a distant rise holding a basket of berries, was standing in a shocked stillness like a tiny figure in a great painting.

Aesh scrambled down the dome, laughing, and ran up the path to the church.

Her church. Stella followed, stumbling. A cloud had covered the sun and the sky was thickening. She was dizzy, held her head to steady it.

Mandros came after, caught hold of her arm and pulled her back a few steps.

"You idiot!" she snarled. "I'm not going to hurt hi—"

A bolt of lightning struck a meter before her.

She screamed in fury, wrenched away and leaped over the charred ground toward the path.

In the church Aesh had his legs hooked round a rafter and was swinging from it. He shrilled and laughed and shrilled.

"Get out of here!"

He laughed, caught the next beam with his hands and grasped it with his legs.

Stella let her breath loose and lowered her voice. "Get out of my church. I'm not going to hurt you."

"Hurt me?" He laughed and swung.

"Come down!"

He sang, swinging, chorused by echoes:

*"Damn the poor, for they shall be trampled!*

*Damn the mourners, they shall*

*have more to mourn!*

*Damn the meek, they shall be driven from Earth!"*

*"Come down!"*

He swung to the next beam, and sang: *"Damn the peacemakers, they shall be war torn!"*

*Damn the merciful, they shall be—*

*"Aesh!"* David's voice. "Stella, for God's sake—"

Lightning struck and shivered a beam above her head. She jumped forward and the timbers missed her. Aesh screamed.

The fearful noise had sent his arms and legs flying out convulsively.

As he fell, Stella, without thought, leaped once more. When he hit, she blacked out.

She opened her eyes. David was rubbing ointment into her wounds.

Headache. Head-quake, maybe. About seven points on the Richter scale, she thought. "What's the damage?"

"There's a hole in the church roof."

"There's a few in me."

"I gave you a shot of antitet."

"Maybe it should be antirabies."

He looked at her wisely. "Mild concussion. Likely your backside aches too. That was where his head hit, and it drove your head onto the floor. Otherwise his skull would have cracked. He broke a humerus and three claws; he bled more than you did."

"Too bad. Oh well. I guess I should have let him take it out on Mandros. It was just the funny look he gave me before he did it. As if he was daring me to intervene."

"He was testing. To see how far he could go. All kids do that."

"I should have known after all these years. I just haven't had a wide experience."

"I had a kid once," he said.

Don't ask, Stella!

Okay, I won't.

"Mandros saved me. They were trying to kill me with one of their bloody lightning bolts. He pulled me back."

"I saw. I wonder whose rules he's playing by."

"I don't think I'll ask. I'm alive. I wonder for how long..."

"The second one missed."

"Did it? Who do you think it was meant for—me or him?"

"Mandros?"

"No. Aesh."

His brow puckered. "Him, Stella? Why?"

"I don't know. I get these feelings..." She began to pull herself up.

"Hey, you better not do that! You've got to rest."

"David, I don't think it matters at this point." She lowered her feet to the floor. He was right. Her backside ached. Her head roared; her teeth felt loose, probably they had cracked together when her head hit.

"Where are you going?"

She staggered drunkenly to the door. "To see him."

Aesh had three expressions: rage, sulks, and unholy glee. He was sulking. His arm was in wired splints, his nails had been cemented.

She looked down at him in the bed where he had been born out of Nadja's screams and blood.

He looked away first, and then at her. "You saved me." Probably he would never forgive her for it.

"Mandros saved me. One good turn."

"You wouldn't let me hurt him."

"And he wouldn't let me hurt you. That's the house that Jack built."

"That is nonsense talk. You would never have hurt me."

"No, I wouldn't." His eye membranes were red and so were his lids. She had never seen him cry. "Did David give you something to take away the pain?"

"Yes." His left arm twitched in its sling.

"Do you read books?"

"No. That is nonsense too. Why do you ask?"

"I was wondering where you got the anti-Beatitudes."

"I don't know what that is."

"Damn the meek and damn the merciful. That's much like something written in a book of ours. Did you make it up?"

He shook his head impatiently. "Why are you bothering me with that? I don't know. Perhaps someone told it to me."

"Maybe," she said. "But in our book we bless them."

She turned to go, but he grabbed at her nightgown. "Stell-la!" he wailed.

She faced him again.

*What do you want, Aesh?*

*I don't know.*

Something new in his eyes, now, a little like fear.

"What is it?"

"Stell-la! Do you love me?"

Her mind went blank.

Love?

Aesh?

*That is nonsense talk.*

*Stell-la! a cry...*

The pain roared in her head. Her mouth worked. "My friends died so you could be born. I took care of you—"

He was trembling.

"—when I knew that I would die for it, and David too..." And the rest of the world. I am the agent of destruction.

His eyes begged.

"They could have cared for you, couldn't they? No, I guess not. You were half-born of this world, a different chemistry, a different mind..."

"You are not saying!"

"I swear I don't know why I did it. You were a newborn baby, and a child. You needed care. I gave it."

"But that is love, Stell-la! Da-veed said it is love!"

"All right." She nodded. "David's a truthful man, and if he said it, it's so. I love you, Aesh."

"Good," he said. "I will sleep now." And he closed his eyes.

She stood before the blasted church, reeling.

"Shar!" she screamed. "Damn you! No," she lowered her burning head and crouched on the rock, "forget I said that. I take it back. There's been too much damnation."

A hand touched her arm. She was beyond flinching.

"You must go in and lie down," said Mandros.

"I won't damn you either," she said thickly. The insects hummed in the shimmering air, and in her head. "Mandros, why did you save me?"

Inside the church a charred beam cracked and fell, splinters bounced on the floor.

"So that you could save him."

She saw him double. Her voice was so slurred her ears hardly registered it. "They fight among themselves, then, those Shar of yours?"

"Who does not? More than one would wish to be Emperor."

"What do you mean?" A wind rose and chilled her sweat.

"The Emperor died... a few hours ago, by your time."

She lay on the bed and dreamed. Sometimes David washed her face, and occasionally tested her reflexes, she felt his thumbs raising her eyelids. In those seconds of vision she saw Mandros standing at the foot of the bed, or thought she saw him.

In her dream she got up and walked out of the door. David went on tending

the body on the bed, but Mandros followed her with his eyes.

The sky was lead. The trees straightened and turned to iron, with burning sconces in their centers. The shadow of each was a Shar, squat and crook-legged. Their eyes were like pomegranate seeds, black pips in red membrane. Crepey skin hung from their armpits in folds, vestiges of a once-winged people. The swampy pools became basins where females, dark hairy lumps of flesh, lay in nutrient baths; unwomen with receptacles in which men might empty their seed without joy; and black crinkled teats to be mindlessly sucked by their infants.

*Mandros, when will they come?*

*In twelve days, when the child is healed. Shar heal fast.*

*And kill us then?*

*They will take him to the ships. The Emperor Aesh will lead them.*

The Shar came forward with hands cupped. In every cup of hands lay a stone, a flat pebble washed endlessly by rain and sea.

Her feet were in wet earth, the wind raised her hair; the air, as always, stank of sulphur.

The cupped hands waited. She picked up a stone: *when the planet was in eccentric orbit, half the time in a void so deep it deadened the soul*

The black pips swam in the red membrane, glittering with fire.

She picked a stone: *and men learned to shift it in its course, to bring it toward the sun*

A stone: *but had not waited long enough to learn to do it well*  
*and the world drifted into the orbit of the void they hated*

Stone.

*and the hatred perverted itself and became pride*

*for what they had not done except build towers of iron and stone.*

Beyond the arches she saw the walls of the towers, iron and stone, glittering with flame and carved with warped and tortured flowers.

*so that they hated themselves and each other, in treachery, deceit, torment, murder; often out of spite they would not beget and when they did found over the millennia*

The last stone: *that their seed, which not only contained sperm, but gave the ovum its female fertility as well, was losing its quality because it too needed light*

Her hands were full of pebbles; she skimmed them in a sulphur sea.

*And all the other planets of Procyon?  
burning gas or thin crusts over fire  
Mandros, why are you telling me all  
this?*

*Because—*

"Christ, I thought you'd never come out of it!" David was gripping her hand.

"What have I done now?"

"Caught a fever from running around outside, on top of everything. For God's sake, don't do that again, eh?"

She scratched the scab on her ear where Aesh had bitten it. "How long?"

"Four days. Mandros and I have been switching between you and Aesh the whole time. It would be nice to have both of you in good health."

Eight days more. "David, will you send Mandros here?"

"Stella! What—"

"No, no, David! I'm not going to conceive another one. Bring Mandros here and stay. There are a lot of questions I have to ask."

Mandros stood at the foot of the bed.

"When I was delirious it seemed to me that you were telling me many things about the Shar. Was it only my fever or were you really telling me those things?"

"I was. Your brain was more receptive when it was feverish."

"Now I'm well. I think." She sat up. "But I remember. You were going to explain why you had told me."

"Because I was made to serve the Emperor and no one else."

"That's not an answer." He was silent.

"I suppose I'm to pull an answer from that?" She sighed. "The Emperor is dead, the Shar will be here in eight days to claim their new one and then decide whether to claim this world. How long will that take?"

"I don't know."

"But he's a child," said David.

"It doesn't seem to matter to them. The Shar...they want to exchange one dying world for another, and I suppose they will kill us all if they take it. That's pitiful as well as horrible. But Shar are horrible—" Mandros did not blink, "—and I used to think you were too, Mandros. All those hundreds of people in the starships were killed, over fifteen years ago. But...after Nadja conceived, Billy and Clyde, Anne-Marie and the rest were sent away. Was Ephraim killed on purpose?"

"Oh no," Mandros said. "He happened to be at the place where they broke the line. That was unfortunate."

David growled, "And I suppose Nadja

was unfortunate too, hah?"

"No. That was." He was silent for the moment it took him to find the word. "Shameful. Of Ephraim I said I was sorry, and I am still. I am not a true Shar. I have been made like a man and like a man I can be sorry."

"And a few were saved," Stella said. "The world is dying, but it might be possible to make it live and grow again. If the Shar leave us alone perhaps people will have new hope—but they must have searched a long time among their nearer stars before they came here, and they won't be willing to go back. Still, there are other places in this system beside the paradise they think they want—planets, moons they could make livable with their technology. Bargains, Mandros. We could make bargains. And they would have their light."

"Their minds are very dark," said Mandros.

"*Theirs?* Clyde and the others were freed. You saved me. Aesh demands love...I think, Mandros, that you and Aesh...and...and even perhaps the old Emperor, if he was watching...have been corrupted by our paradise. By our light." She added, "In your language."

Mandros stood without a word. His eyes were blank.

Across the hall, Aesh began to cry. "Maan-dros!" He turned and left them.

"Eight days, Stella? Traveling out beyond Pluto? He won't be well by then."

"Mandros says he will."

"Emperor! My God, even for a quick-growing Shar he's young for that."

"He'll have advisors."

"Yes, and I can guess what they'll advise, if they don't kill him first. Mandros isn't all that effective a guardian. I still don't understand why he told you."

"I don't either. All I know is—David!" She took his face in her hands and drew it to hers. "There is very little time!"

His arms went around her. "You're not well," he whispered.

"Oh, I am now—but does it matter?"

Aesh the Emperor gave no orders, climbed no walls. He knelt on a settee made from a church pew and stared out through the triangles at the rain, the sun, the blowing trees. He let David coil his claws with the plastic filling so he could not scratch his splinted arm. At night he walked the spaces of the dome; his noisy clogs echoed and no one reproved him.

Stella, David and Mandros went

through the motions of life, and did not speak much. Mandros became again the automaton he had been in the old days. Stella mopped and swept, paused to finger the rugs she had braided with Annabel and the others, refolded shawls and sweaters. They were torn and raveling.

She felt, not quite fear, but something she could not name. A heaviness in her belly, as if she were about to give birth, or else a pressure at the top of her head as if she were a fetus butting at the amniotic membrane, about to be born. At times she thought she must be going back into her old neurosis, or still suffering from concussion, because the weight shaped itself into WHY DID HE SAVE THEM?, and the pressure into WHY DID HE TELL ME? Then she felt a stab of fear. She pushed it away, and made love with David in quiet and powerful tenderness.

On the eighth day the sky was dark, and they moved like sleepwalkers.

"You haven't eaten," said David.

"I'm not hungry." She went into the common room to have a smoke and found Mandros standing in front of the fireplace.

He was holding something, and staring at her.

"What is that?" she asked dully.

He held it out to her.

She had thought at first that it might be a wooden flower, like the one with which he had marked the grave, but it was a stone sphere.

It was heavy, she had to grip tightly to keep from dropping it.

Black stone, with a few bright crystals embedded in it like stars; marked off in triangles and hexagons, in each a small perfect carving. A sun and the eccentric orbit of its planet, a Shar with crooked body and pitted eyes, a warped and tormented flower...

"The Emperor's seal," he said.

"But why give it to—Mandros?"

He had sat down on the floor and was taking off his boots. Then he crossed his legs, rested his hands on his knees.

"It is time," he said. His face was pale, but his eyes were clear and alive, there might have been a glint of humor in them at the expression on her face.

"For what?"

"To destruct. Please don't be offended. It is not ugly. Though," he cocked his head, "I am glad I was not made more beautiful or I might not be willing to go."

"Destruct!"

"Yes." He was becoming translucent.



He said gently, explaining to a child, "To dissolve and—go."

She saw the shadows of skull and bones. "But Aesh—"

"I was made to last until the son of the Emperor could be delivered. I had the honor of helping to prepare the Emperor himself."

"You can't! You—"

His flesh was a skin of water around the bone. But he was right. His dissolution was not ugly, but had the beauty of a fine anatomical drawing. "I have no choice. I was timed for this." She bowed her head to the sphere. "I was the seed-capsule of the Emperor. I did what was required. But I had feelings, once, and I was a man." She closed her eyes. "Listen!"

She raised her head. The bone hands lifted and turned up, in offering. The skull said, "I did not want them to die, and that is the truth, I swear..."

A dwindling, a crumbling into whiteness.

A few scattered crystals among the clothes.

David's hands came around her shoulders. "What did he give you?"

"A stone."

From behind them came a whimper. Aesh was standing in fearful loneliness.

David removed the metal splint and sealed the small wounds it had made. Aesh flexed his arm. "That will be stiff for a while," David said. His hands, once they had finished their work, began to shake.

Aesh knelt on the window seat and looked out. The sky was clearing.

Stella, still gripping the sphere, was looking down at Mandros's bunk. The bedding had been stripped and piled, neatly folded, in its center. Except for his clothing, Mandros had owned no object. His place was bare.

Aesh too had owned no toy or keepsake, and Stella herself was holding the only thing that was due to him. She held it to her forehead, and once again it told its story.

*Why did you save?*

*Why did you tell?*

*Why did you give?*

*I suppose I'm to answer...*

Her head butted against the membrane, and forced.

The sun was westering.

"Maybe they won't come today," David said.

"I think they will."

There was a roaring in the sky. Aesh trembled. He was holding the seal.

Stella took her coat from the hook. It would be a cool evening. The blue coat was very old, very worn. She had given up her vanity, the cornmeal, and the nap was worn down, the edges grimy, the fur matted. Only Ephraim's stitching remained sound and beautiful. It had been the color the sky should have been, and become the color the sky was. She held the coat and listened to the roar. Her body felt like phosphorus, pale and burning.

"Stella?"

She turned.

"You can't go out now, it's dangerous! Did you think you could take him to the—"

"I'm going with him."

"With him!" The implication struck. He stood up, his face darkened and burst into sweat. "No," he whispered.

"If Aesh wants."

She looked at the Emperor. His lips were quivering. He pressed the seal against them and nodded.

"Why, in God's name, why, Stella?"

She moved close and met his eyes.

"Stella... good Lord, *what are you!*"

Her breath caught on a sob. "Don't look at me like that!"

"I can't help it!" He palmed the sweat from his face. "You're not—you're not—"

"I'm not a Procyon, David! I'm not!"

"No..." he seemed to be speaking without breath. "And you're not Stella either."

Her voice shook. "I'm as much Stella as I ever was."

He stood with head bowed, arms hanging. "Bargains. You really believe..."

"David! Are you sorry you loved me?"

His head and arms rose, she dropped the coat and flung herself against him, his fists knotted behind her back, she could not tell whether the burning tears between their faces were his or her own.

The noise stopped.

She turned once for the last sight of David before the dome. His glasses flashed stars from the setting sun.

Aesh, gripping his seal, huddled against her body beneath the coat, and their faintly luminous shape moved over earth darkened with broken twigs,

mouldering leaves, and the shadow of night. She followed the path she had taken so many times and remembered the steps she had retraced endlessly toward the past, when in truth her life had begun at the farthest step to bring her here.

"Are you afraid?" Aesh whispered.

"No." She was full of sorrow, and if she had looked at David one more time or one moment longer she would have been in torment.

The shuttle, a sphere, had landed on the rock; its fires had exploded the church into blackened fragments, a final obscenity.

Aesh moved away from her, kicking off his clogs, and she waited. She felt the dampness of the soil through her moccasins, the wind lifted her hair, for once swept away the drench of sulphur and brought the sweetness of the earth.

A lock door opened, a ladder descended. Three Shar stood in the shadow of the opening, and though their mouths and noses were masked in the alien atmosphere she could see their eyes, like pomegranate seeds, catching a flicker of red sunset, and the dark drape of the folded skin in their armpits. Their bodies were thick and crook-legged, and Aesh's arrow-sleender body seemed very vulnerable to be facing them. He climbed the rungs lightly, and she did not hear, but understood the word that greeted him.

*Majesty.*

It was heavy with irony.

Aesh, on the threshold, nodded, and with deliberation turned his back on them. On the fingers of one hand he balanced the seal lightly as a bubble, and with the other beckoned to Stella. Whatever his back may have told them, his face, in the last light, was filled with unholy joy.

He was after all not alone.

Stella placed a foot on the first rung, and the three voices struck like brass bells in her head:

*Who/who are/are you?*

*Why are/what for/are you/are here?*

She climbed the second rung. "I am..." She paused for the word of the maker, the bargainer, the most delicate word in the world.

*messenger*

"I am a messenger of the Adversary," she said.



(Continued from P. 17)

dangered species (440 pounds of plant and animal) were needed to balance the ecosphere for every man, woman or child aboard), the elephants *et al* were supposed to have been able to thrive, to breed themselves back from the shadow of extinction in this most unspoiled of environments only the myth of the Garden could approximate in design and scope. Obviously, however, a new serpent was about; or so Harry thought until the area above his head was blocked out by a man named Bojipcho, whose smile danced against the swollen sky as he said, "Harry Jones, you son-of-a-bitch. What in the hell are you doing here?"

Harry sat up so fast his head seemed to whirl in some centrifuge of darkness; but when he braced his arms behind him and shook back the call of the abyss his vision cleared and Bojipcho, his one-time boss at Serengeti, materialized again.

"From what I hear you took one nasty spill," he said, offering down his hand. "Think you can maybe stand?"

Harry nodded, reached, pulled, then stood—shakily at first, but soon with growing strength as he tried to hastily reconstruct what had happened since he'd abandoned the truck.

Behind him and to the right lay the sanguine wreck of the elephant, the accordioned cab and twisted refrigeration carriage, the feasting birds and the ranger whose leg had been hurt, leaning against his jeep. Harry allowed himself only a brief look at the brutal mass of pachyderm and truck; all his plans for flying the harvested intestinal meat to the Great Cable (there to be relayed into space and cloned back in the colony cylinders) now seemed as flimsy as the curtains of dust the elephant congregation had raised in their having moved on to the north. Along with several cruising jeeps they could still be seen in the near distance; but whether it had been the strong smell of gasoline, the violent death of one of their members or the shepherding rangers that had driven them there Harry had no idea. He was about to ask his former boss to enlighten him one way or another when he

heard the retort of a rifle and saw still another ranger firing on a collapsed bull.

The animal raised its head slightly when the dart struck its wrinkled flank, quivered and was still, scarcely displacing the legions of carrion eaters already chewing away at the entrails. Bojipcho pointed out several other recumbent behemoths that looked like they might have been still alive, then turned back to Harry as the ranger with the rifle moved in on their elongated profiles.

"Now then, *bwana* Jones, I hate to seem inhospitable, especially after two of my men owe their lives to you, but don't you think you picked a rather untoward occasion to drop in for a visit? I mean, you do know what's been going on, I presume..." Bojipcho waited for him to nod, then took out a handkerchief and polished the mahogany oval of his face, wiping away the dust and the perspiration with the effort. When he finished he smiled and shook his head, a gesture Harry remembered to be quite frequent while he'd worked under the man. "... I guess you're just as lucky as the rest of us the rains dried up before they could soak little more than the westernmost fringes of the park."

Harry thought about children and made a warm bearlike sound that connoted pleasure. But this was quick to fade as he heard another rifle retort and gazed out over the field of dead. When he turned back to Bojipcho, the ranger seemed to anticipate his question.

"I know, I know, they are some thirty-odd elephants out there that weren't so lucky. We had everyone in the park out on a couple of all-night massive round-up sessions and we're still going to lose a fine herd of zebra, some gnu and maybe about fifteen or twenty percent of the elephants. But provided the advanced farming and husbandry techniques you hear so much about these days can keep the same from being poached for stew pots, we should be able to breed all three of them back within the decade."

"Here's hoping," he said, taking a swig from his canteen. At which point the ranger with the rifle joined them and

Harry was startled to see the man who had tried to persuade him into flying to Serengeti a day-and-a-half ago.

A round of canteen sharing later (it was marvelous how good bourbon cut the dust, Harry thought), Bojipcho introduced the ranger to Harry, the ranger explained how they had met under less favorable circumstances and Harry remembered why the ranger had stuck in his mind: he had been the only other *mzungu*, or white man, in the Zaman at the time of their meeting.

After the ranger detailed how he had finally gotten to Seronera ("Fortunately, I found a pilot who wasn't nearly half as drunk as you or me"), Harry conceived this artifice: that when the news about the radiation leak first broke he had felt so guilty about not having been able to help the ranger he had quick-flighted it for Seronera to offer whatever aid he could.

Bojipcho took him for his word and offered him another swig of bourbon, smiling with appreciation. "It's too bad you didn't arrive a little earlier," he said, still holding out the canteen. "We could have used you then, but now everything's pretty much under wraps. You're welcome, though, to hang around for a while and do a little visiting..."

Harry considered for all of three seconds before he shook his head. "No," he said smiling, "I'm, afraid this time you're out of luck. I've got a date for the Great Cable with a lady friend of mine tomorrow and that means lots of flying still ahead. But I'll tell you what. For the first ride back to Seronera—" this, as if in consolation—"not only will I trade whatever my share on that canteen is, but also a few stories about my world-famous sex-capades."

Bojipcho, groaning, was kind enough to offer to take him back immediately, along with the injured ranger; as the heat began its early morning dervish Harry did his best to explain how an old love affair had led him to hot-wire a refrigeration truck and drive out onto the African plain.



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